

## **APPENDIX F-4**

### **Transmission Site Logging and Access Control**

During periods when proponent personnel were present at the Mt. Beacon test site, secured equipment was continuously attended by the test site manager or his designee. Secured equipment consisted of the encoders/modulators at the Mt. Beacon site and the system receivers, which were installed in the test van. Proponents were required to receive prior permission from the test site manager before supervised adjustments or repairs could be made to any of the secured equipment. During times when the secured equipment was not in use, it was locked in the Mt. Beacon test room or in the test van, which was parked in a garage near the test site.

Logs were kept during times when the Eureka 147 and AT&T/Lucent IBAC transmission systems were operated. Operation of the Eureka 147 system required prior and real-time coordination with the National Telecommunications and Information Administration (NTIA), the Aerospace & Flight Test Radio Coordinating Council (AFTRCC), and the National Aeronautics and Space Administration (NASA). A monitoring station at NASA/Ames Research Center in Sunnyvale, California, was set up for continuous monitoring of the Eureka 147 L-band transmissions during periods when the system was active. Operation of the Eureka 147 system was limited to weekdays between 8:00 am and 4:00 pm local time. Operating power of the Eureka 147 system was monitored at the test site by persons designated by the test site manager, as well as remotely using a dial-up modem for the single frequency network sites, when they were operated, to ensure that the FCC-authorized power for each site was not exceeded.

Operation of the AT&T/Lucent DAR system was conducted entirely from the Mt. Beacon test site. During each day of initial testing and during days when test data was being gathered, the proponent activated the equipment approximately one hour before it was used, to allow the system to stabilize. After the initial stabilization period, power readings of the intermediate power amplifier (IPA) and the power amplifier (PA) were recorded. Additional readings were taken and recorded generally twice more during each day to ensure that the system was operating within established power tolerances; minor power adjustments were made as needed.

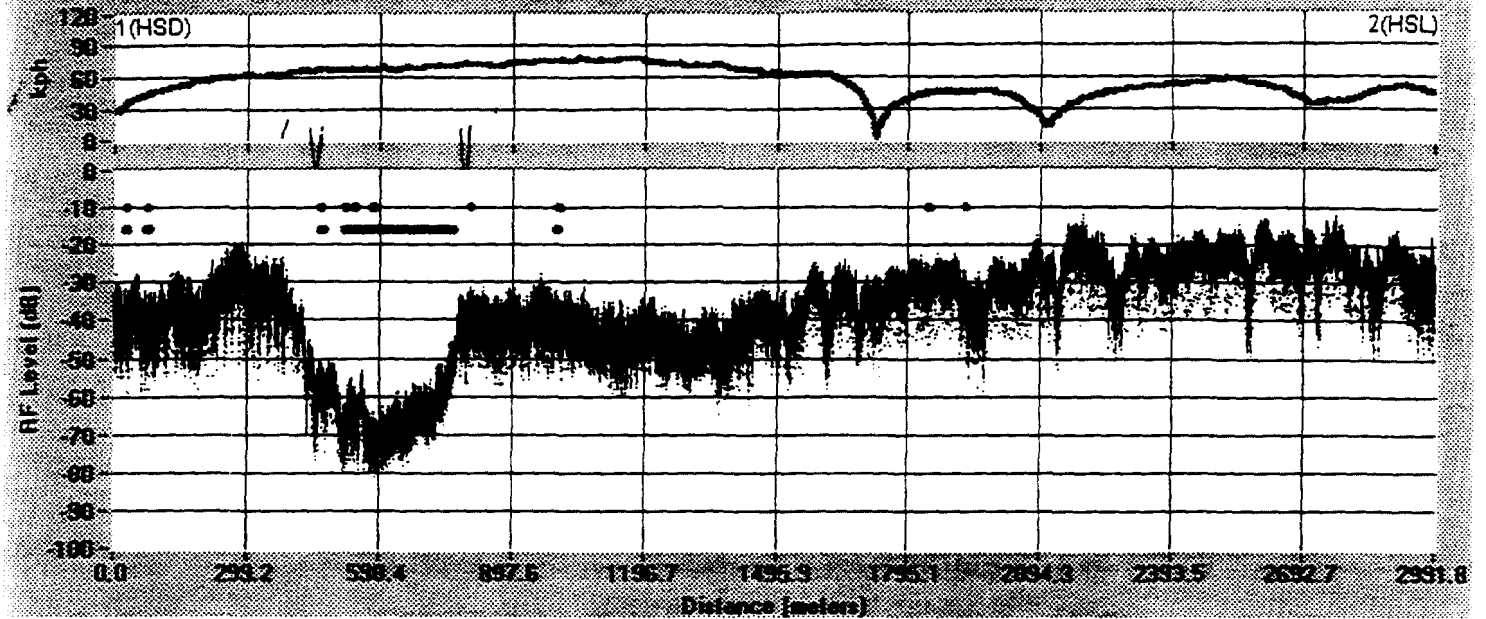
Operation of the VOA/JPL transmission uplink equipment was handled entirely by the staff at the White Sands Test Center, near Las Cruces, New Mexico. A prior schedule was arranged with the proponent and the equipment was activated during the coordinated time periods. Other than the actual times of operation, no other information about operation of the VOA/JPL system was recorded at the test site.

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**R.F. - graphical information detail and unusual events  
(specific samples and expanded view series)  
Item; Path & Span; Description**

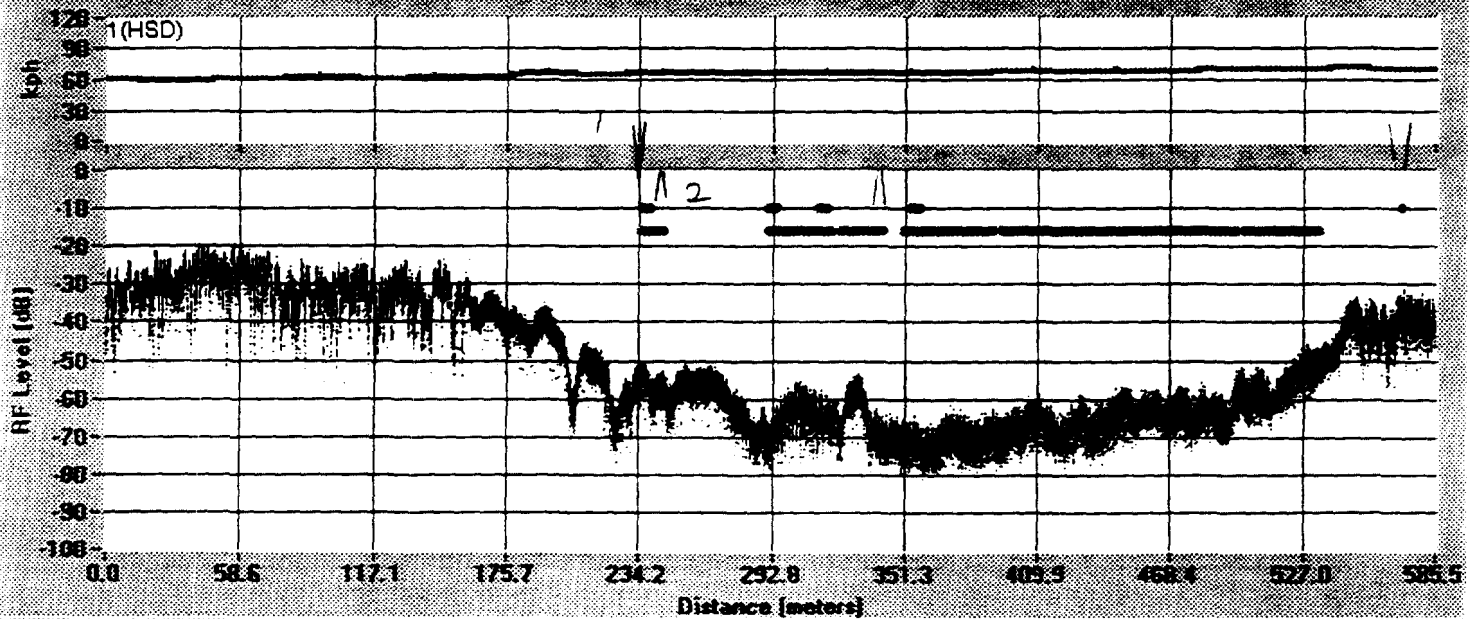
- G-1 VHF System; Route P Landmark 1-2 and sections; Multipath standing waves with expansion showing detail, data structure and unusual event at entrance to tunnel.**
- G-2 L-Band System; Route P Landmark 1-2 and sections; Expansion showing event at entrance to tunnel.**
- G-3 VHF System; Route D Landmark 18-19 and sections; Multipath standing waves with expansion showing details.**
- G-4 L-Band System; Route S Landmark 2-3 central section; Over water path with R.F. fading event.**

### AT&T Lucent IBAC – Perimeter route – Landmarks 1-2



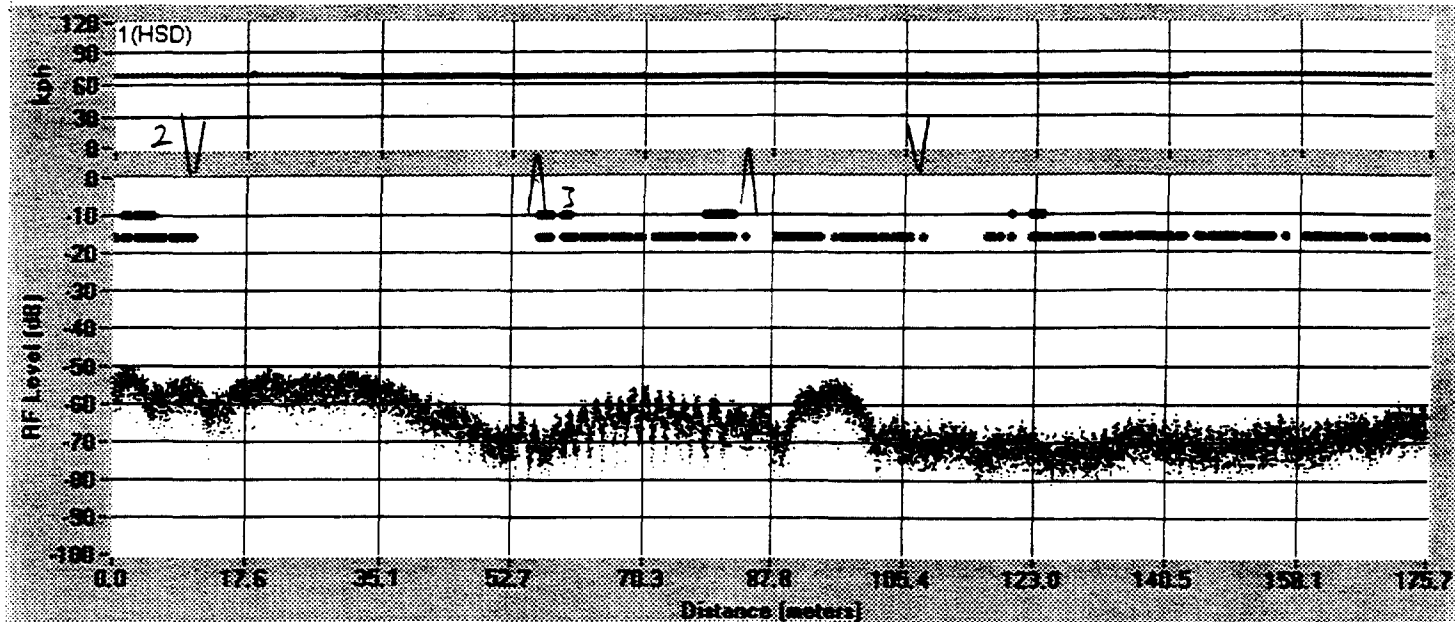
Event Summary: Clear 4488 (93.3%), Impaired 0 (0.0%), Muted 321 (6.7%)

### AT&T Lucent IBAC – Perimeter route – Records 250000-300000



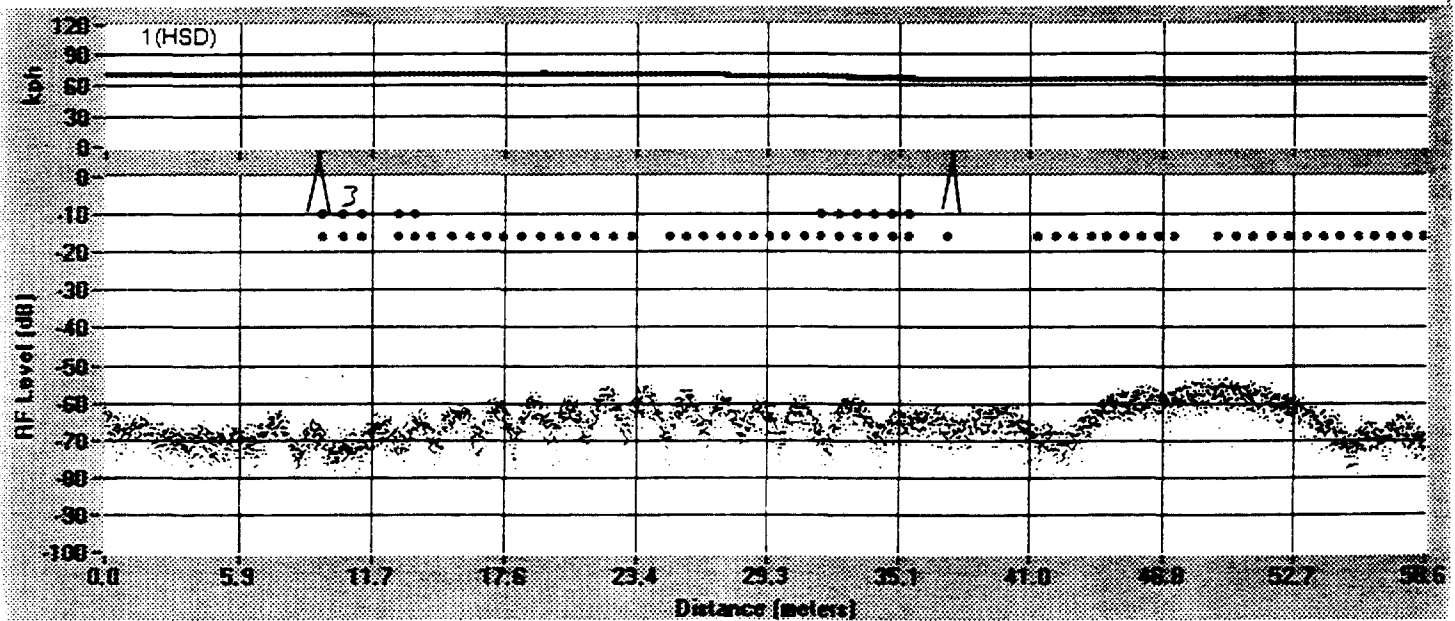
Event Summary: Clear 397 (59.2%), Impaired 0 (0.0%), Muted 274 (40.8%)

# AT&T Lucent IBAC – Perimeter route – Records 270000-285000



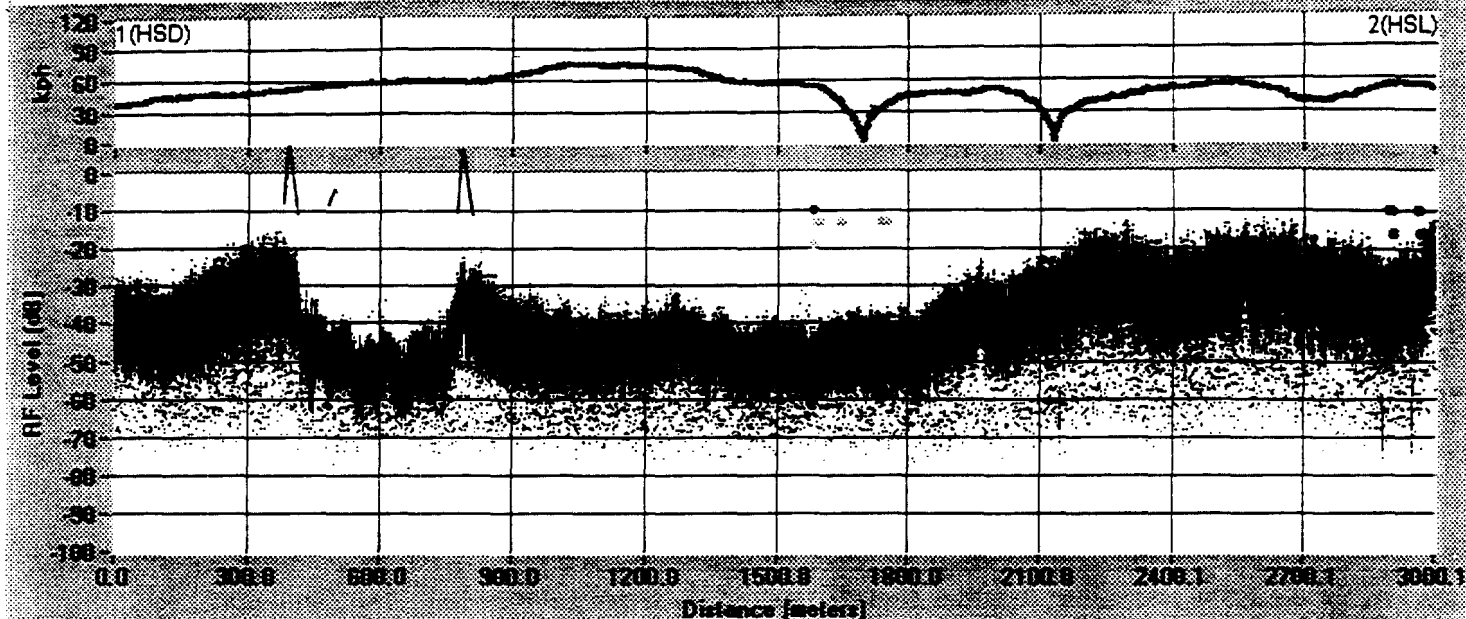
Event Summary: Clear 59 (30.1%); Impaired 0 (0.0%); Muted 137 (69.9%)

# AT&T Lucent IBAC – Perimeter route – Records 274000-279000



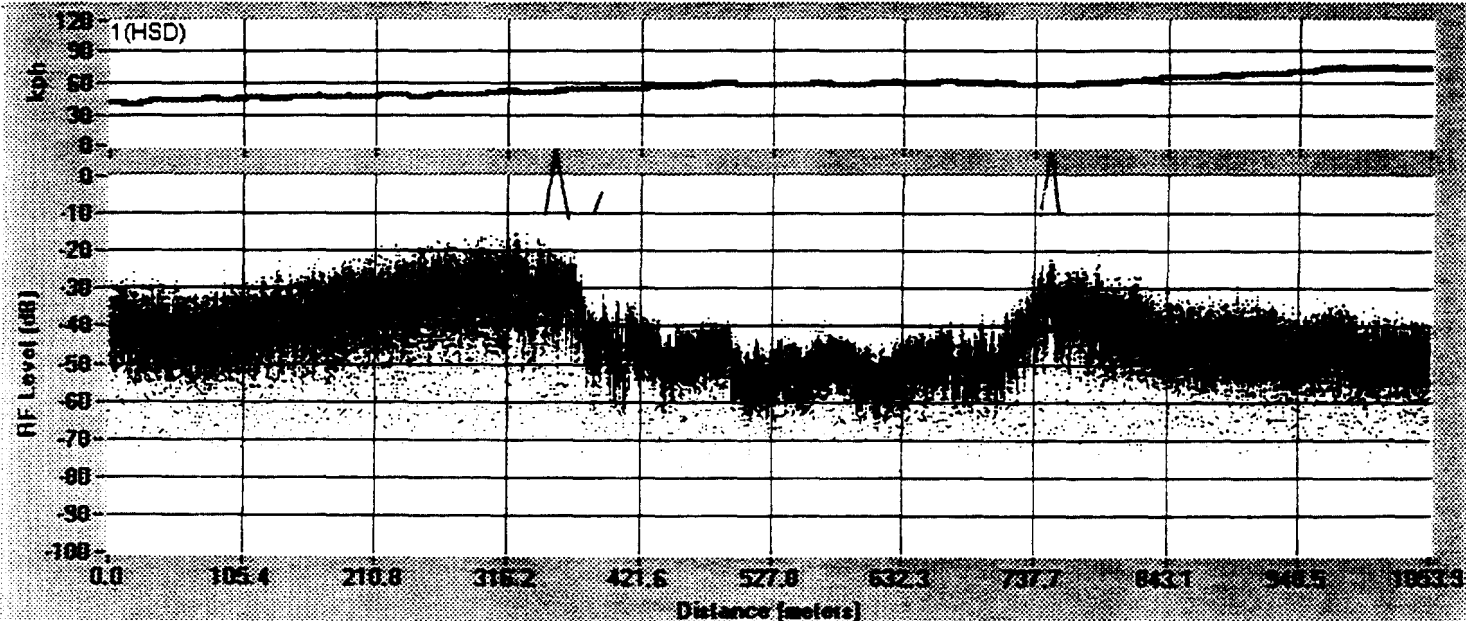
Event Summary: Clear 8 (12.7%); Impaired 0 (0.0%); Muted 55 (87.3%)

# EUREKA-147 – Perimeter route – Landmarks 1-2



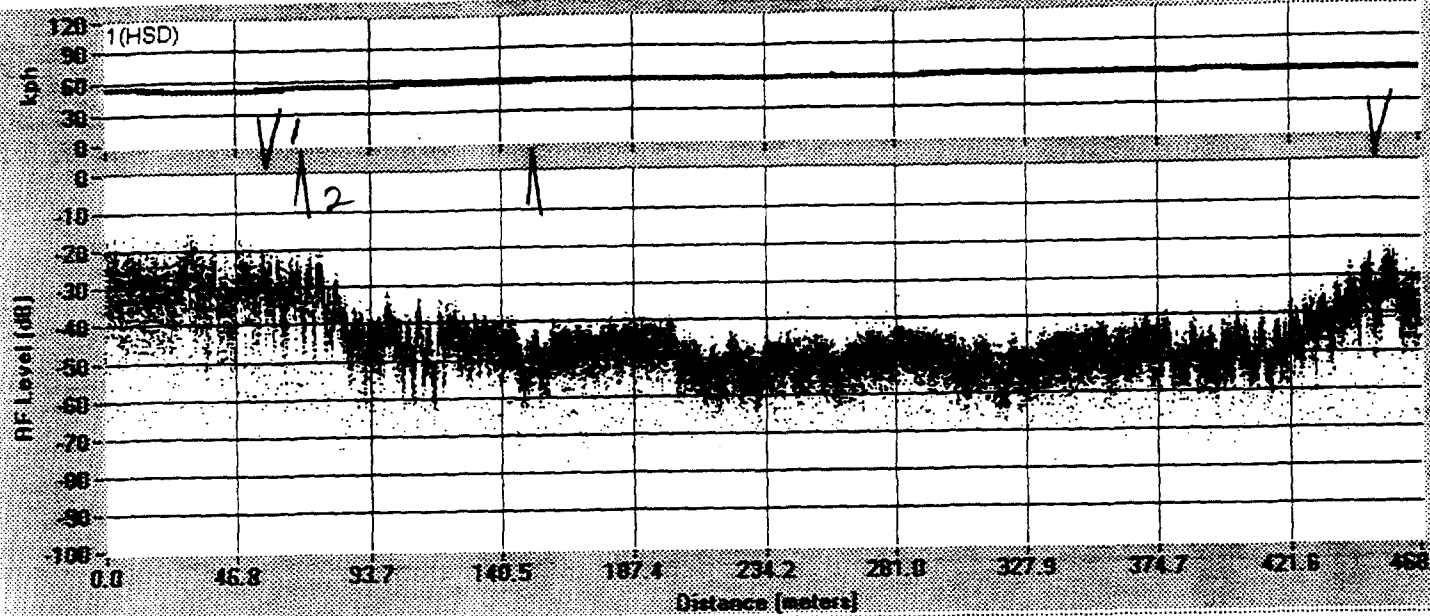
Event Summary Clear 5230 (97.8%), Impaired 35 (0.7%), Muted 49 (0.9%)

# EUREKA-147 – Perimeter route – Records 185000-275000



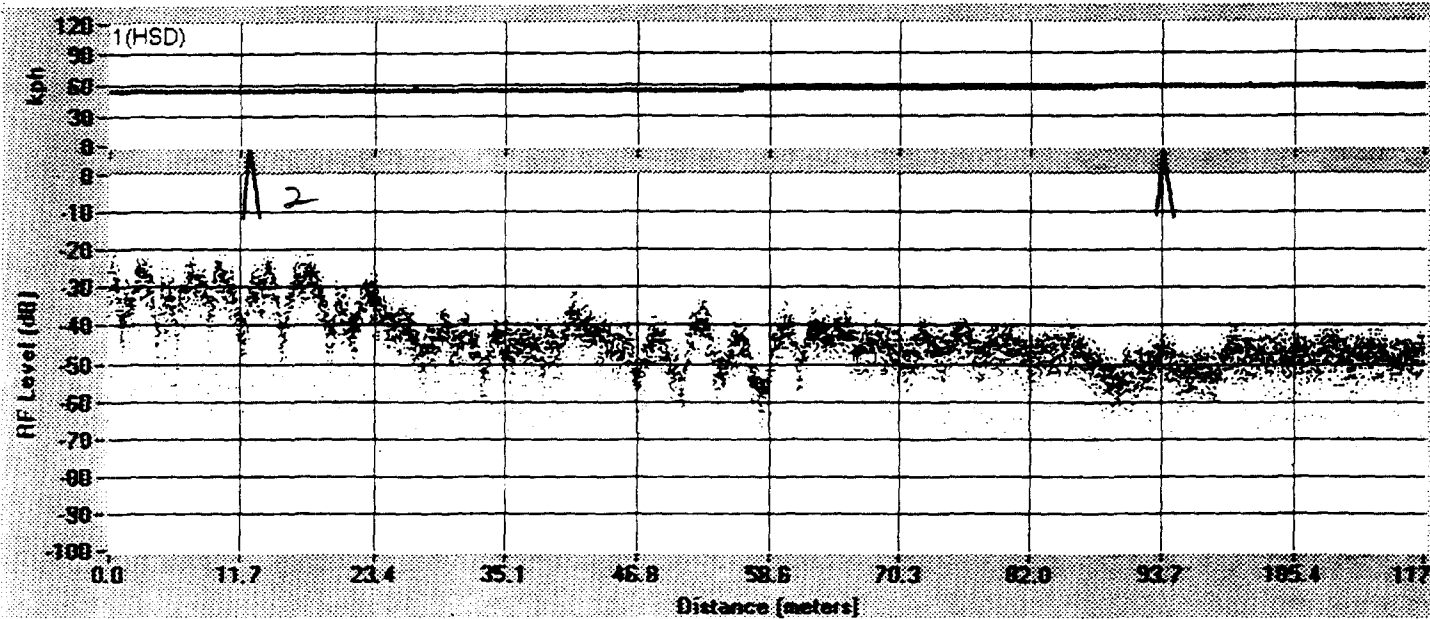
Event Summary Clear 1412 (97.4%), Impaired 0 (0.0%), Muted 0 (0.0%)

# EUREKA-147 -- Perimeter route -- Records 210000-250000



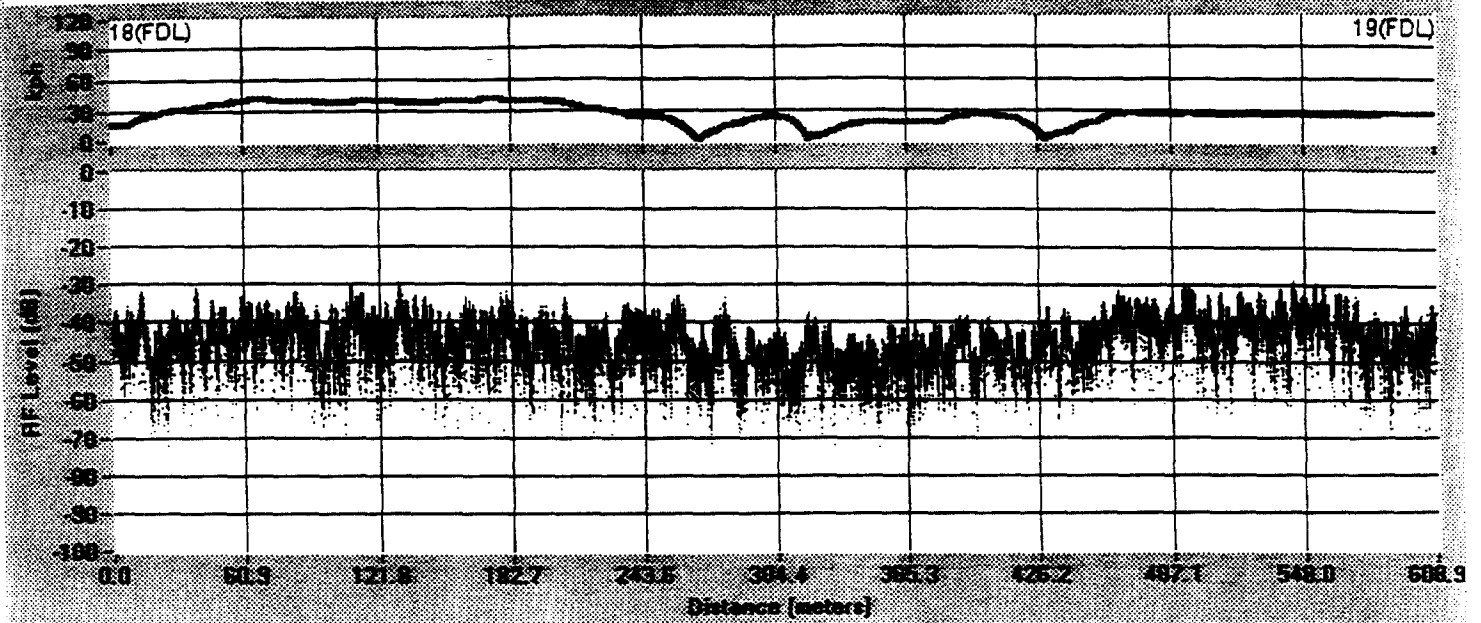
Event Summary Clear 581 (94.0%), Impaired 0 (0.0%), Muted 0 (0.0%)

# EUREKA-147 -- Perimeter route -- Records 215000-225000



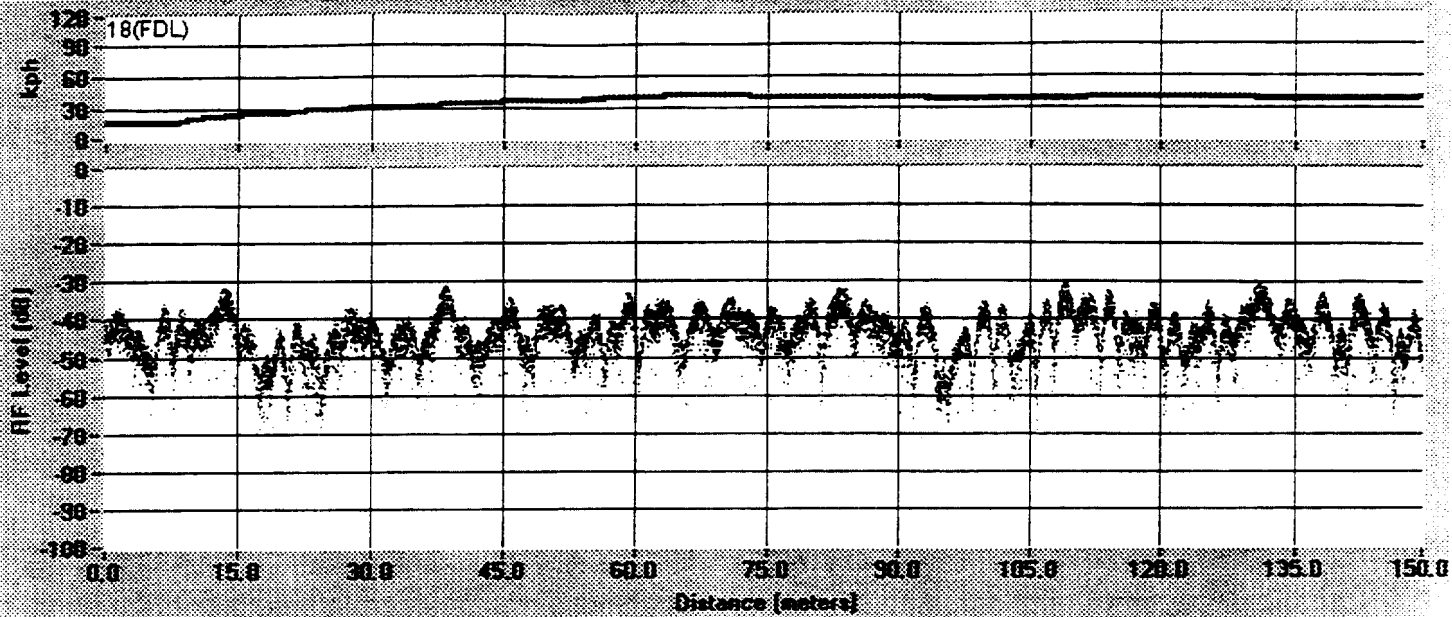
Event Summary Clear 163 (100.0%), Impaired 0 (0.0%), Muted 0 (0.0%)

# AT&T Lucent IBAC – Downtown Route – Landmarks 18-19



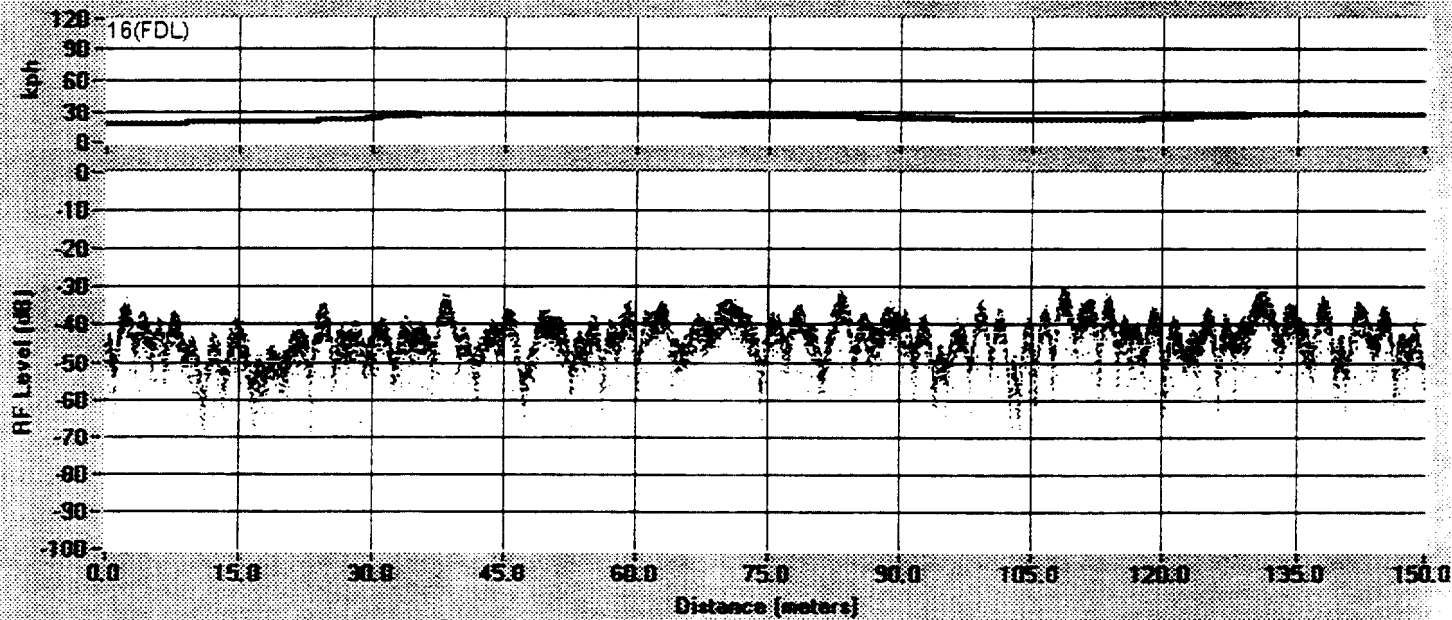
Event Summary: Total 2621; Clear 2621 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

### AT&T Lucent IBAC – Downtown Route – Records 1852254-1865063



Event Summary: Total 360; Clear 360 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

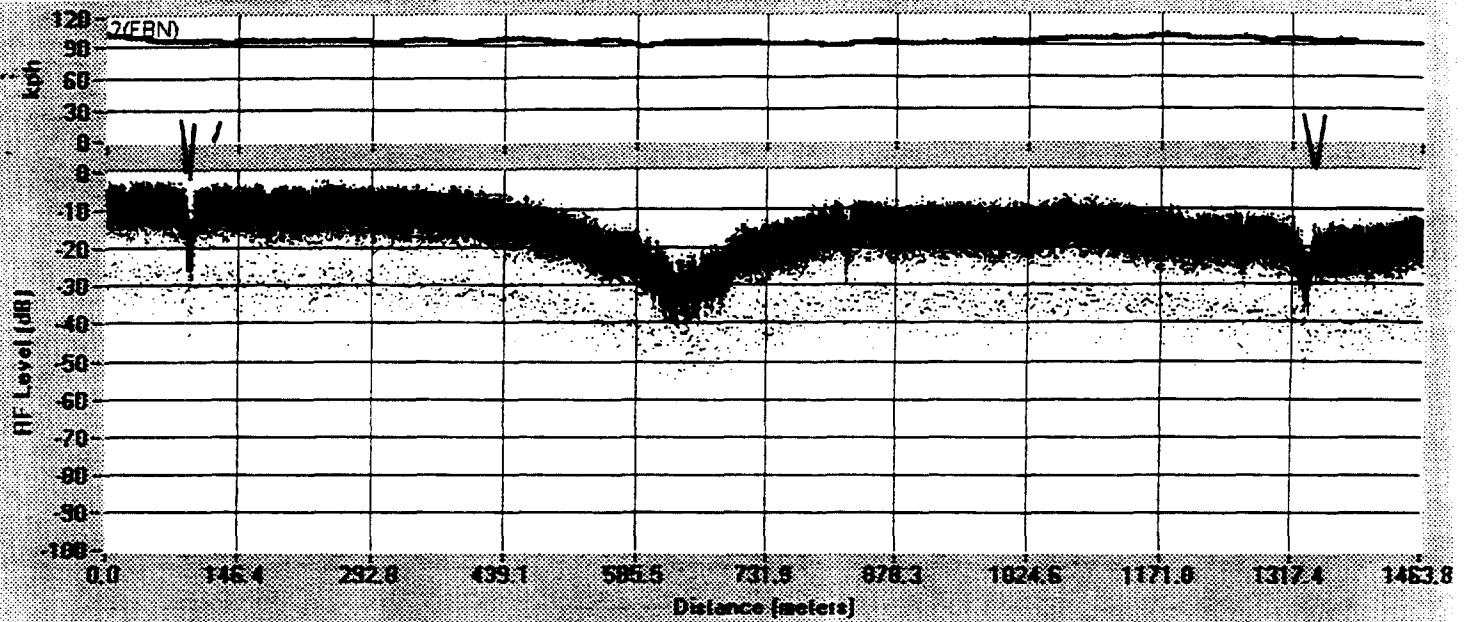
### AT&T Lucent IBAC – Downtown Route – Records 1750469-1763278



Event Summary: Total 521; Clear 521 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

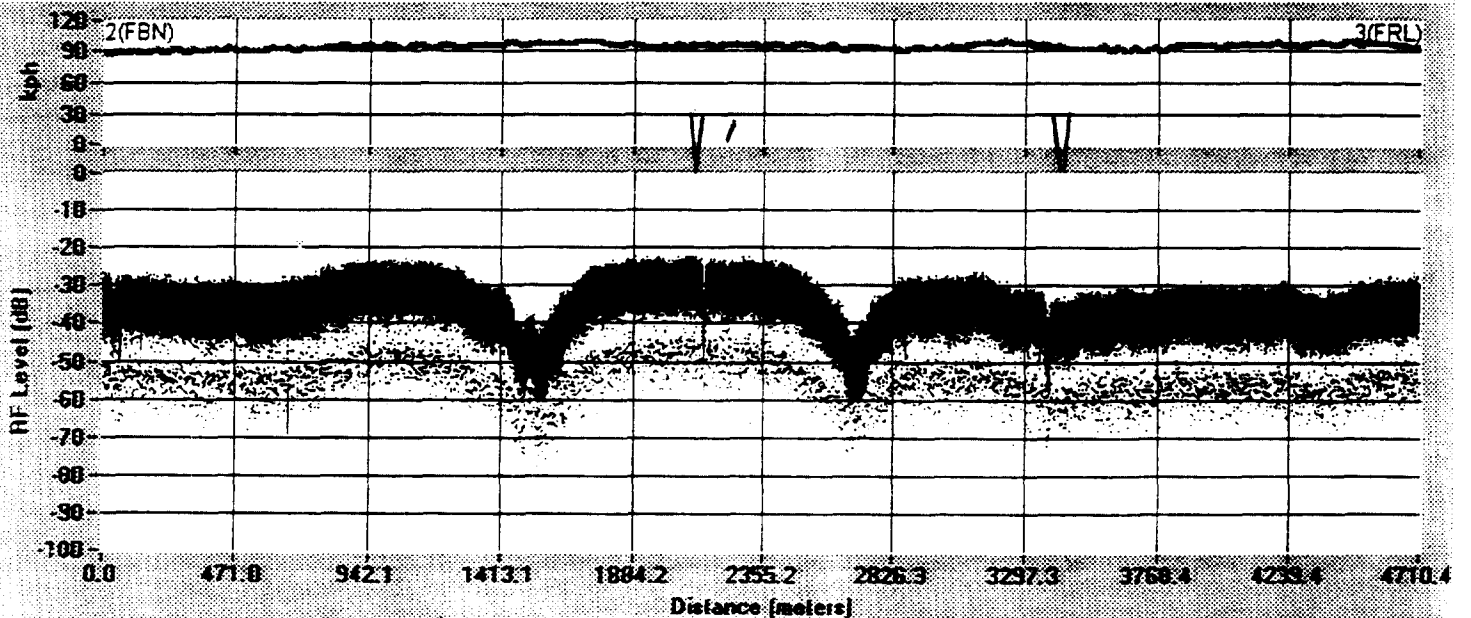


# **EUREKA-147 (single) – South Bay Route – Records 425000-550000**



Event Summary: Total 1091; Clear 1091 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

# **EUREKA-147 (single) – South Bay Route – Records 250332-652589**



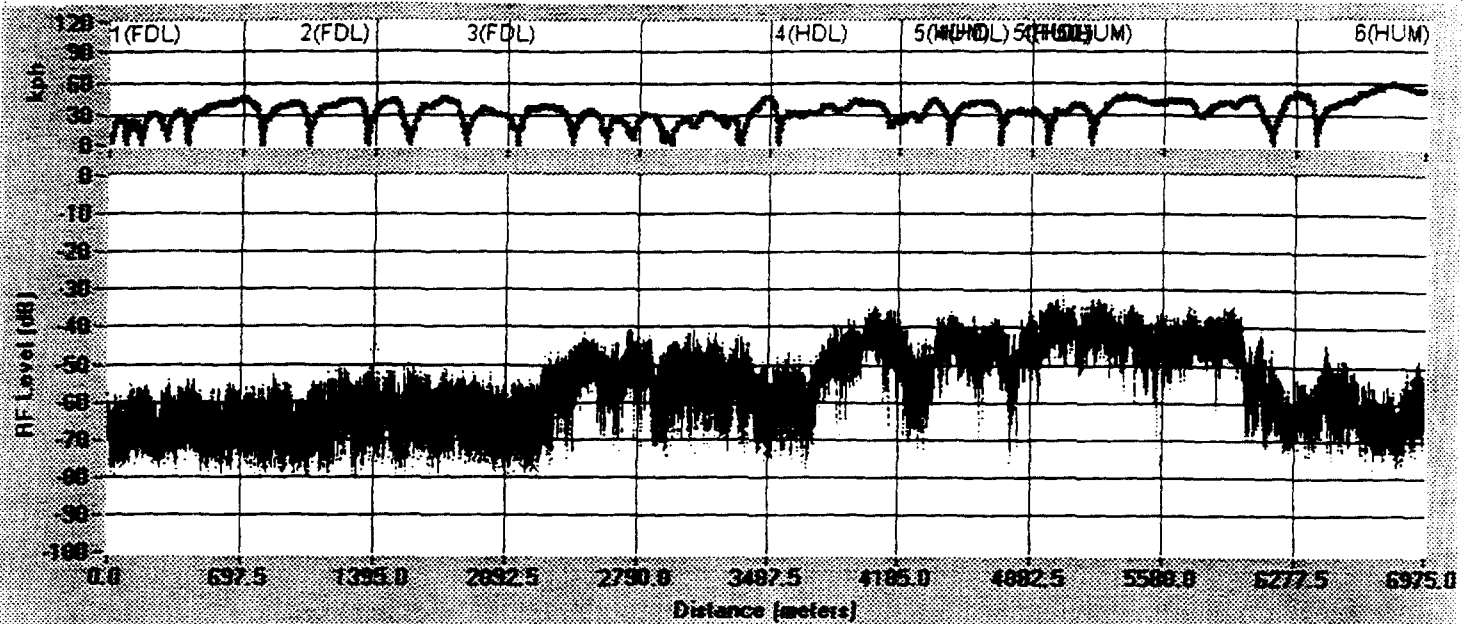
Event Summary: Total 3517; Clear 3512 (99.9%); Impaired 5 (0.1%); Muted 0 (0.0%).

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### **VHF Interference Survey**

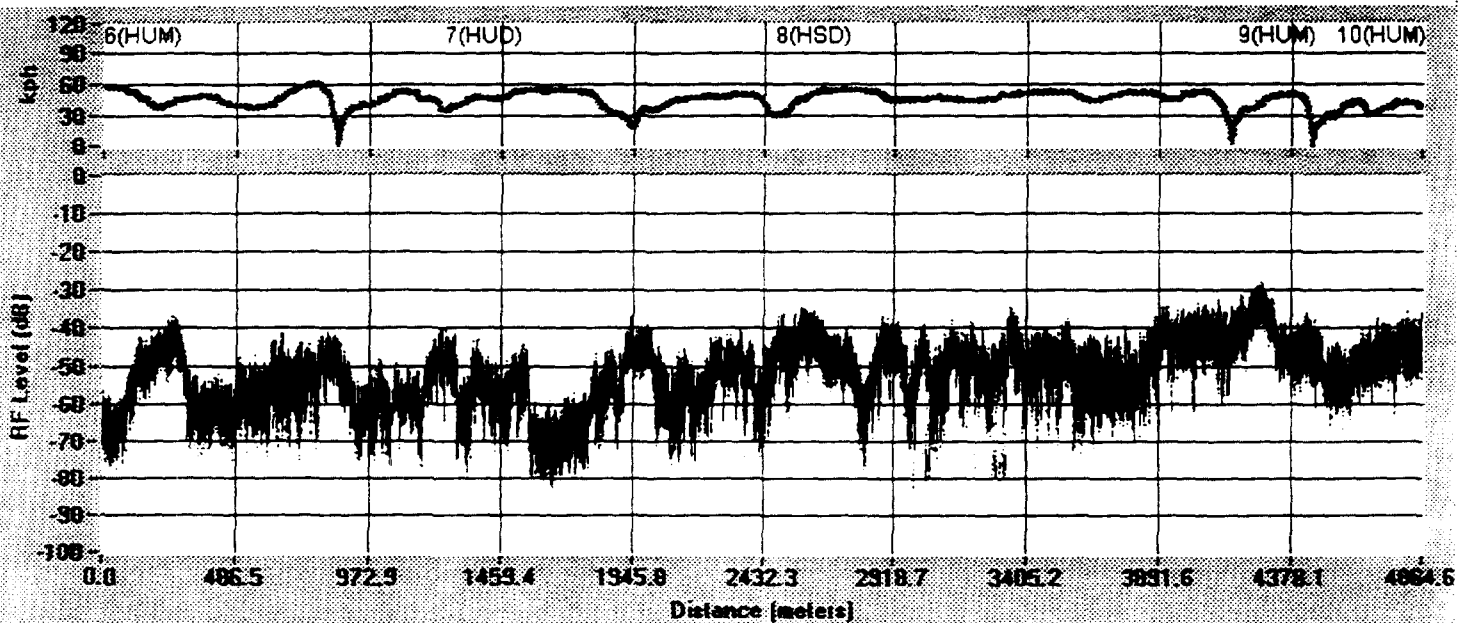
**Continuous recording of the background R.F. at the VHF test frequency, using the same equipment and method as for the VHF proponent testing, without the VHF test transmitter active.**

### VHF Reference -- Downtown Route -- Landmarks 1-6

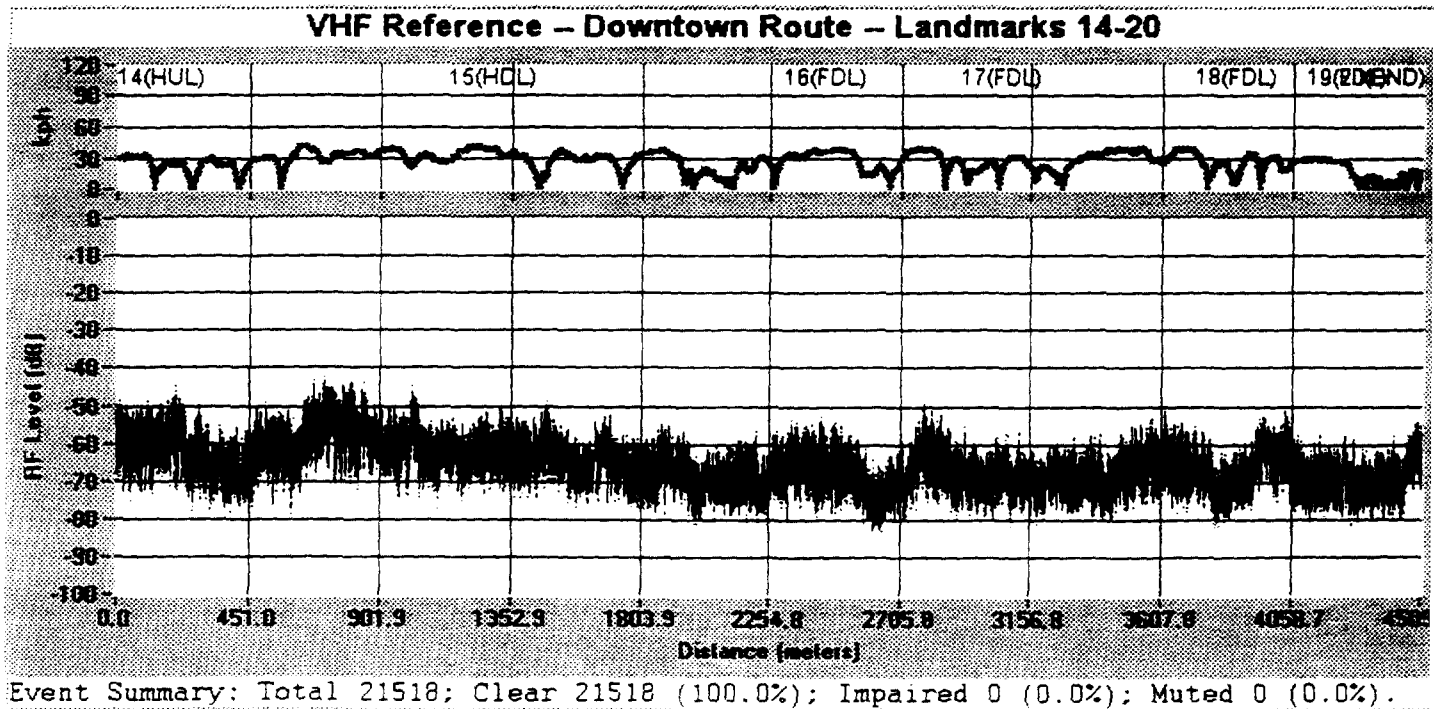
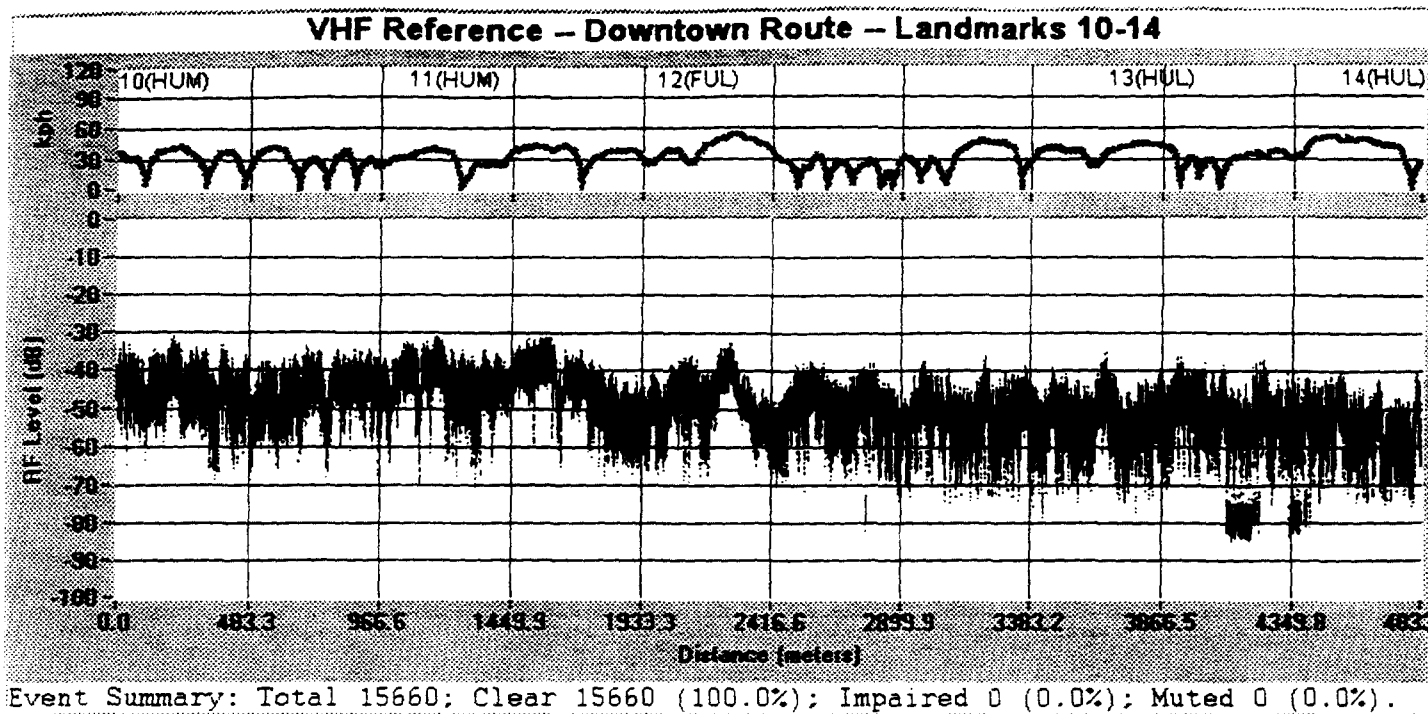


Event Summary: Total 22924; Clear 22924 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

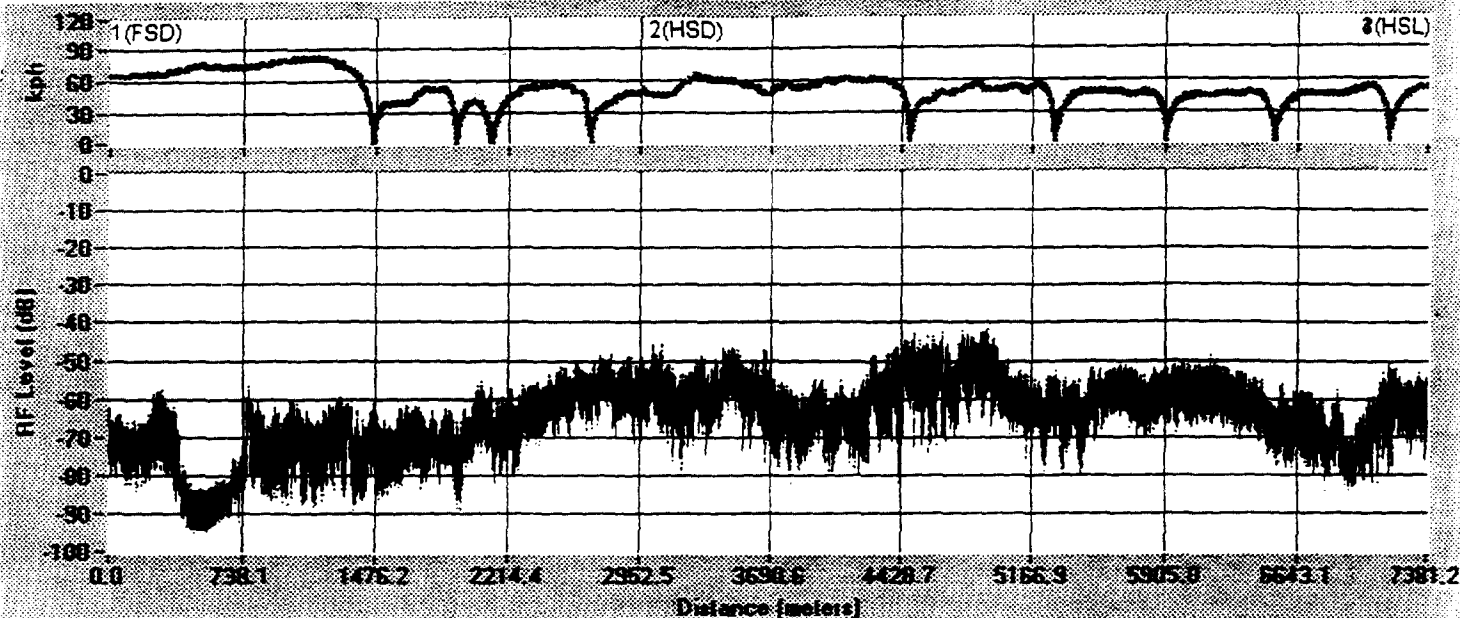
### VHF Reference -- Downtown Route -- Landmarks 6-10



Event Summary: Total 9323; Clear 9323 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

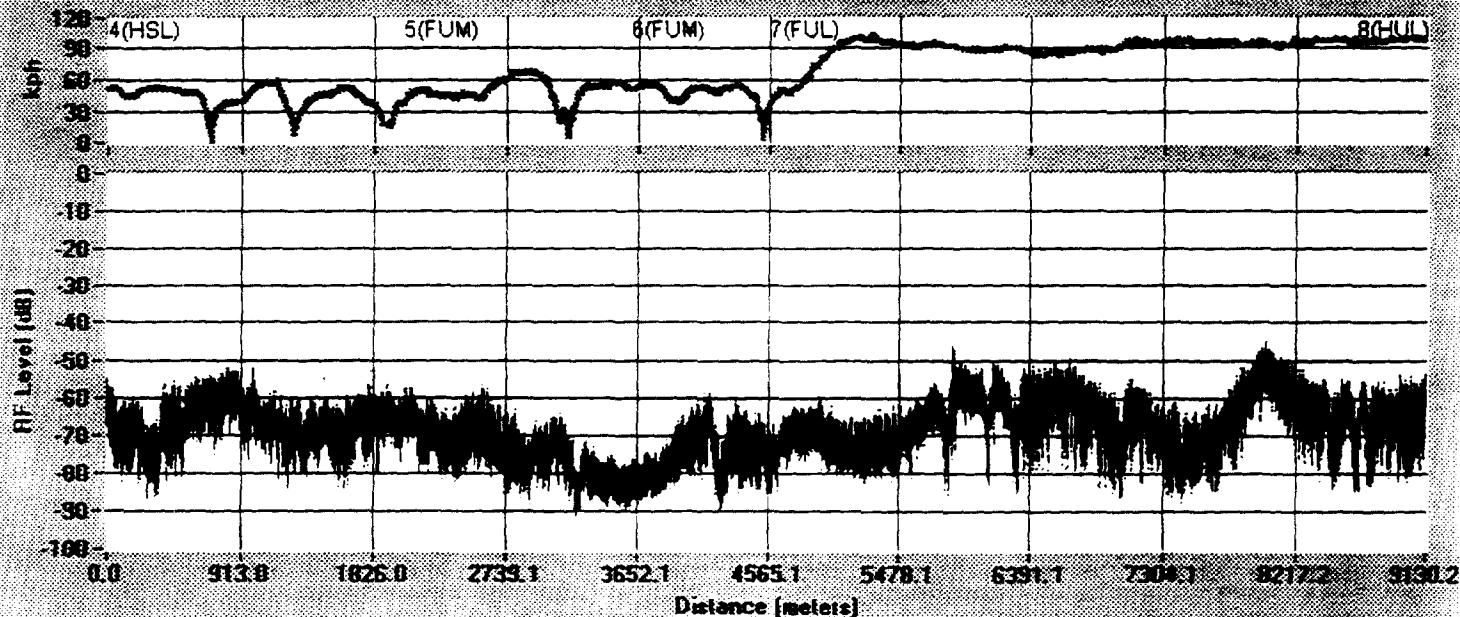


# VHF Reference -- Perimeter Route -- Landmarks 1-4

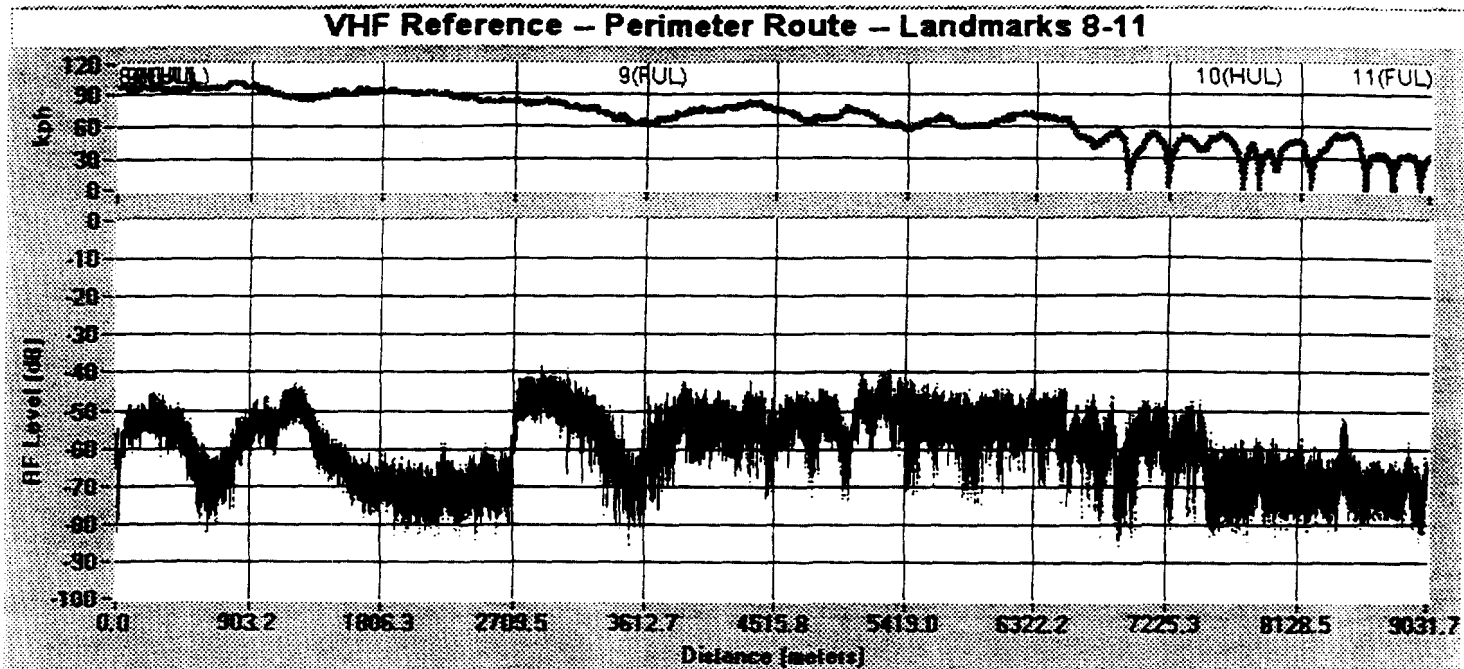


Event Summary: Total 14163; Clear 14163 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

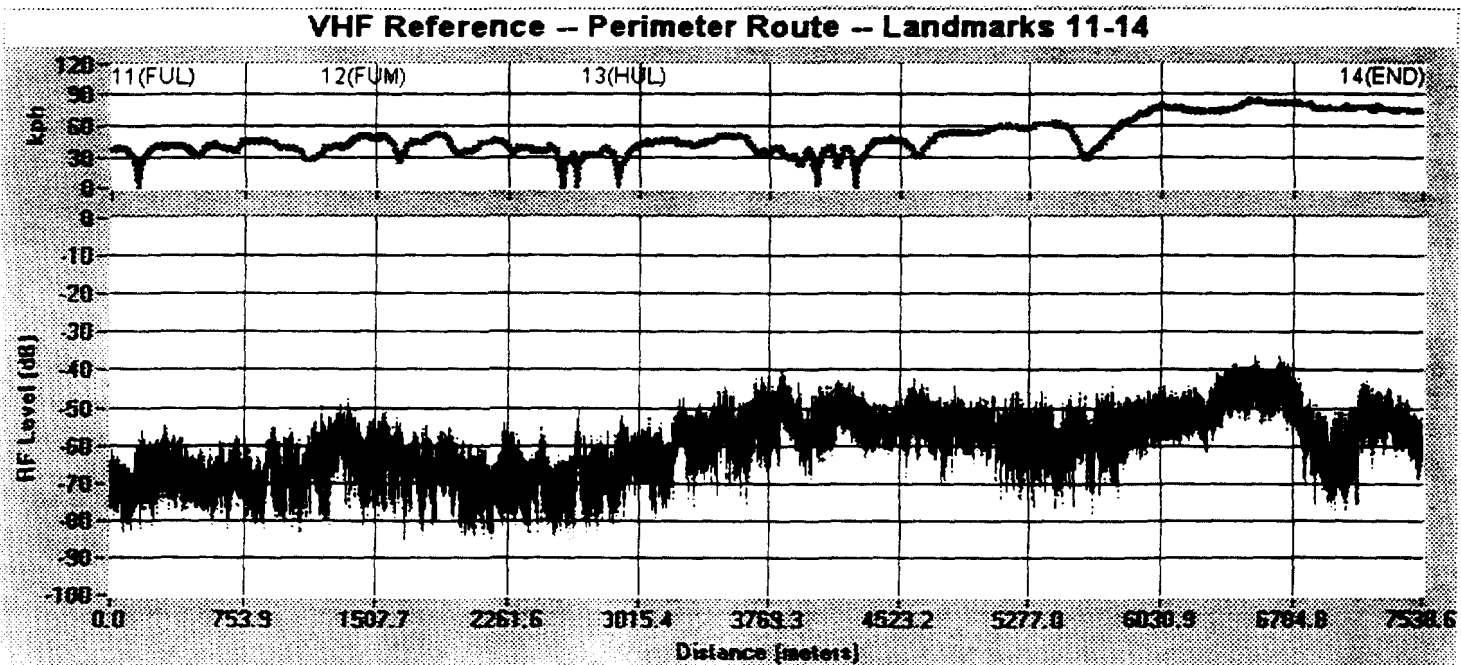
# VHF Reference -- Perimeter Route -- Landmarks 4-8



Event Summary: Total 12658; Clear 12658 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

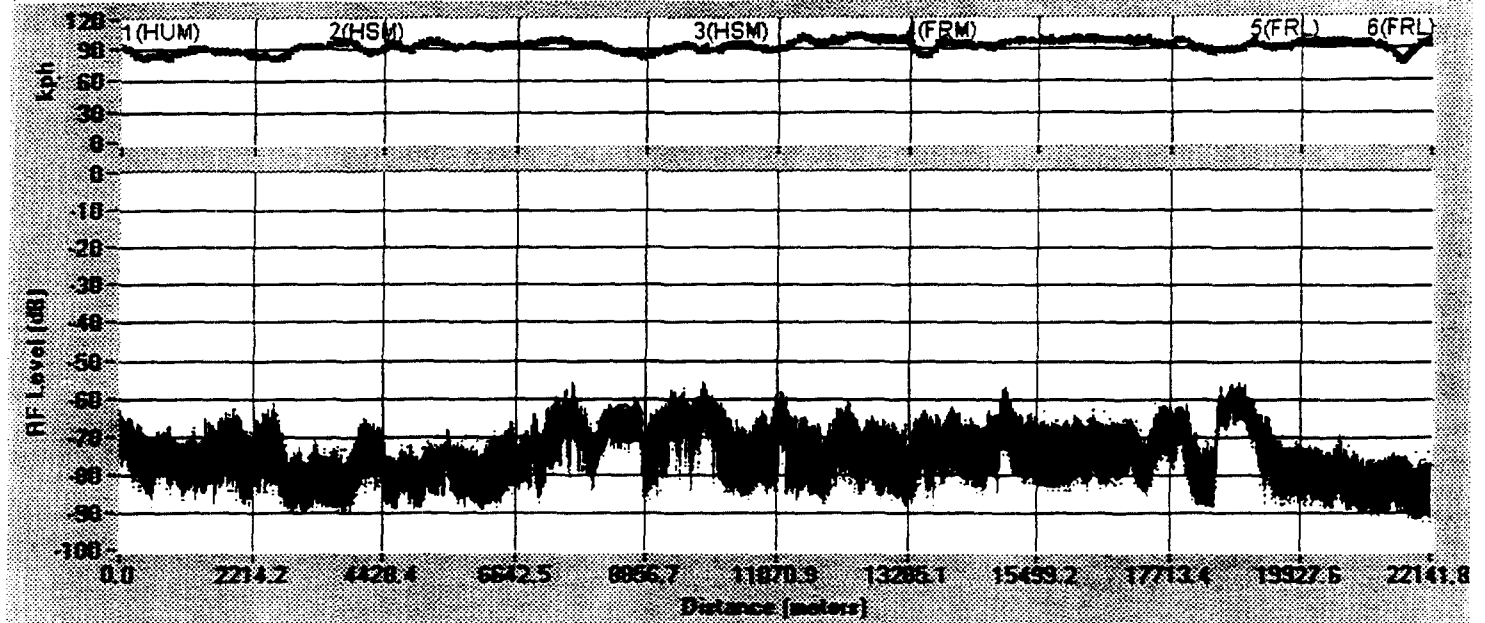


Event Summary: Total 13058; Clear 13058 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).



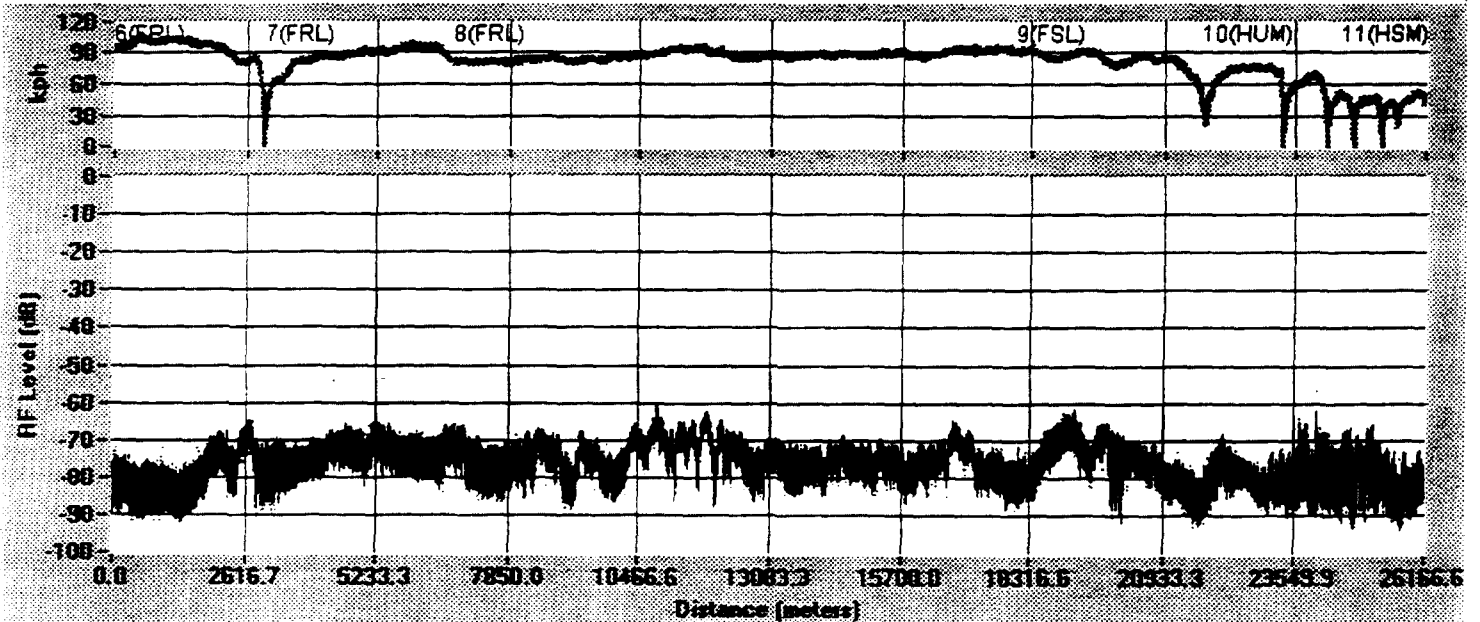
Event Summary: Total 14683; Clear 14683 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

### VHF Reference – North Bay Route – Landmarks 1-6



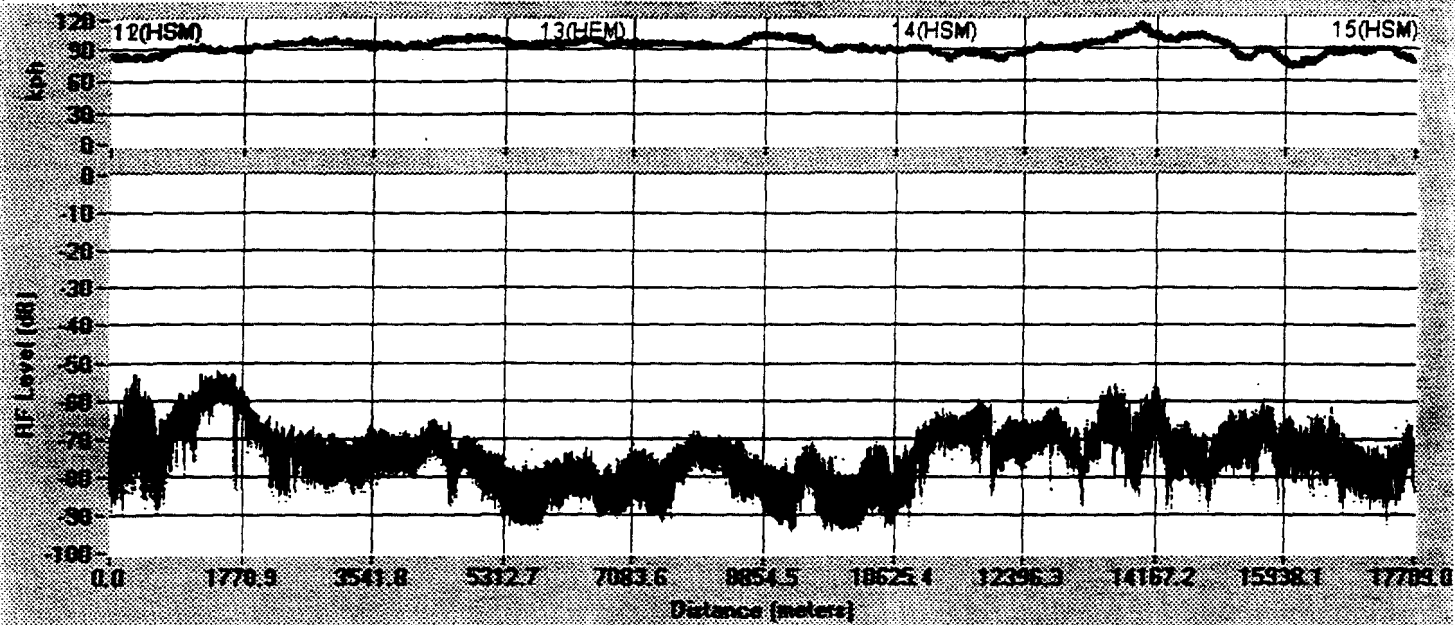
Event Summary: Total 17185; Clear 17185 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

### VHF Reference – North Bay Route – Landmarks 6-11



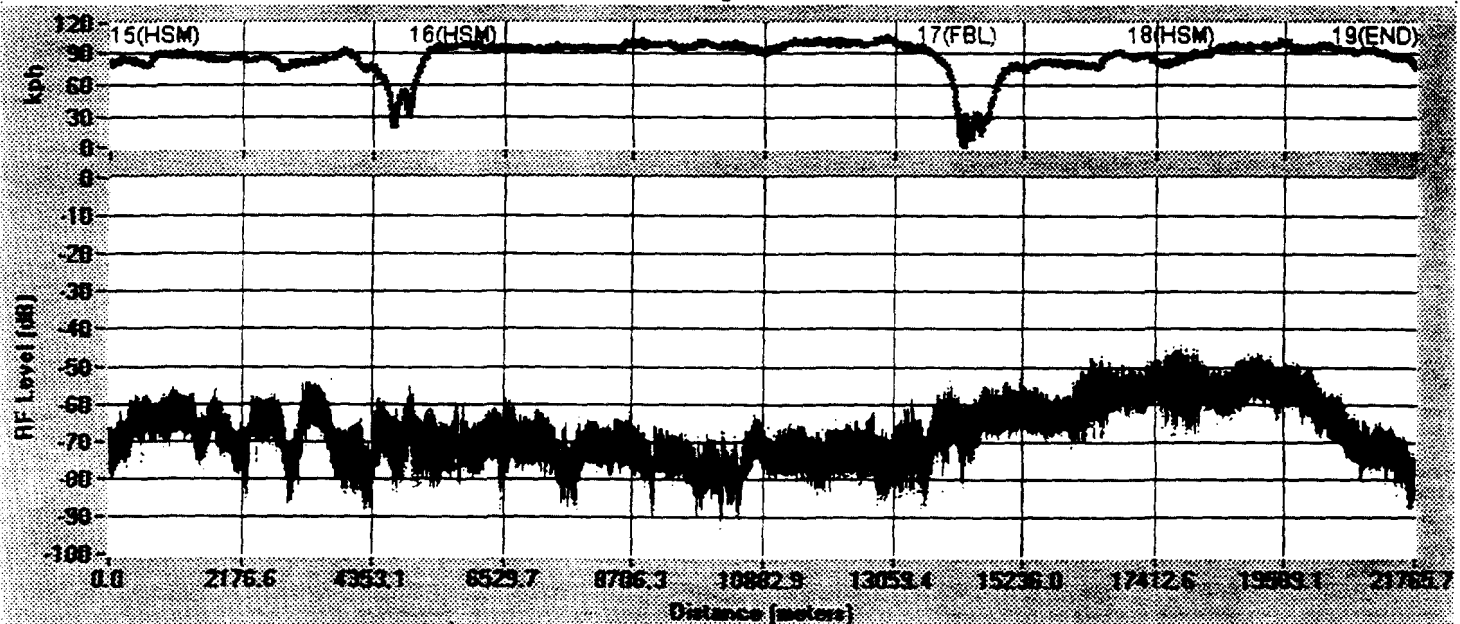
Event Summary: Total 26450; Clear 26450 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

### VHF Reference – North Bay Route – Landmarks 11-15



Event Summary: Total 13836; Clear 13836 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

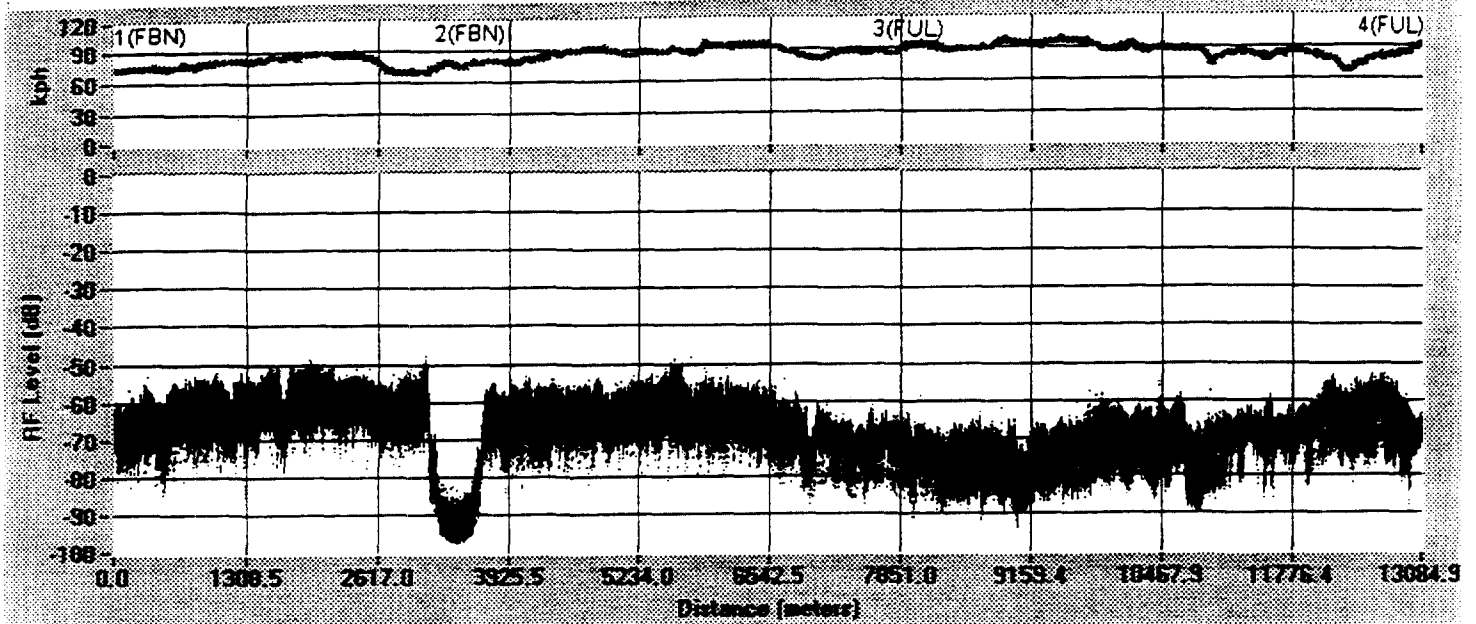
### VHF Reference – North Bay Route – Landmarks 15-19



Event Summary: Total 20805; Clear 20805 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

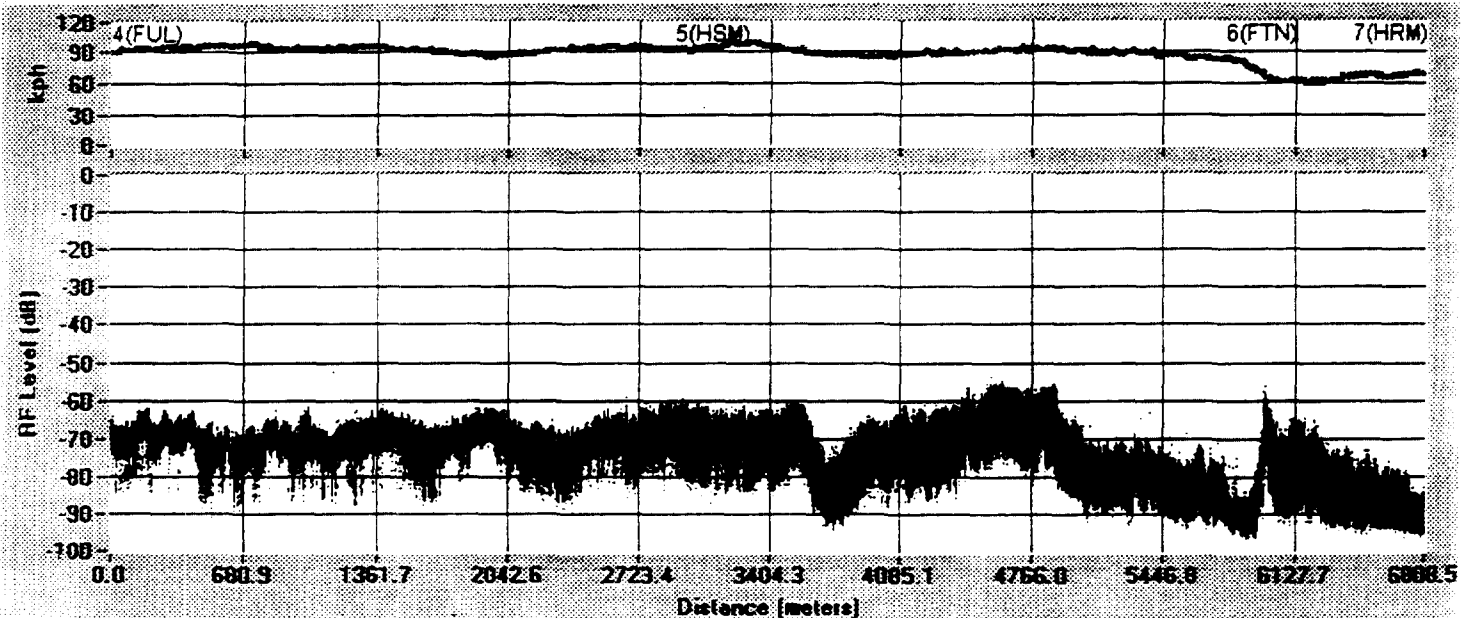


### VHF Reference -- East Bay Route -- Landmarks 1-4



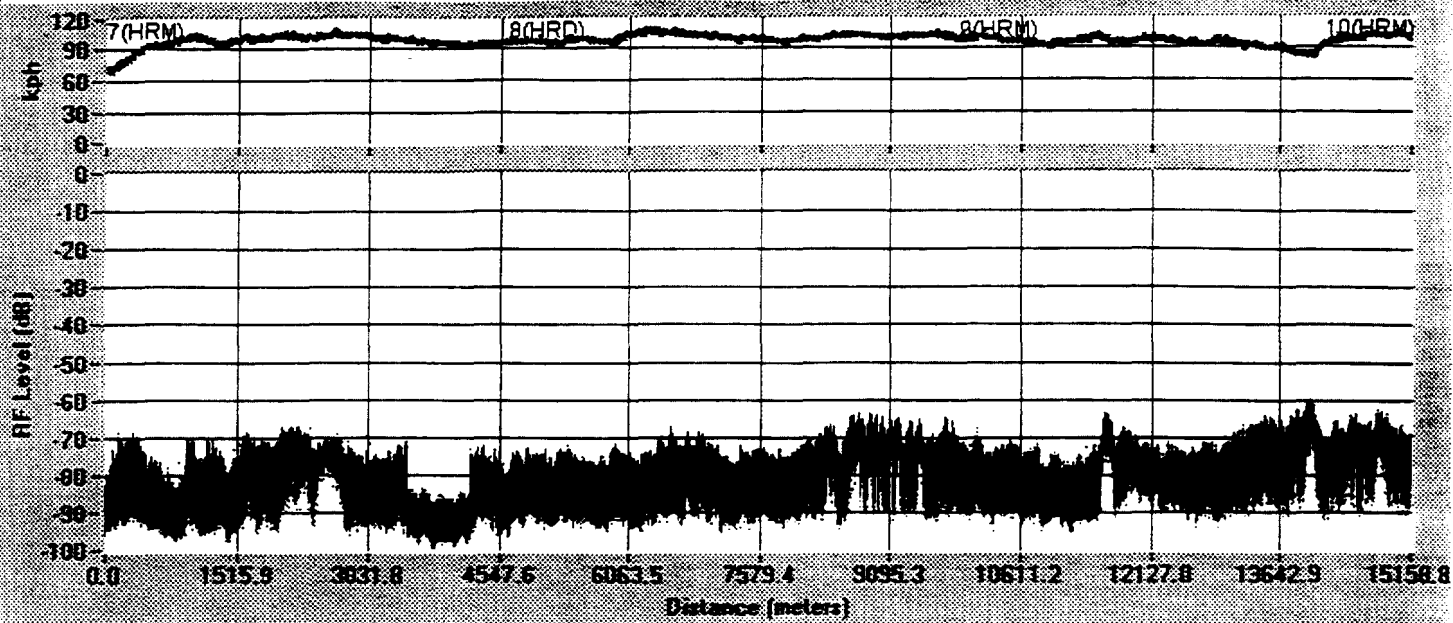
Event Summary: Total 11427; Clear 11427 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

### VHF Reference -- East Bay Route -- Landmarks 4-7



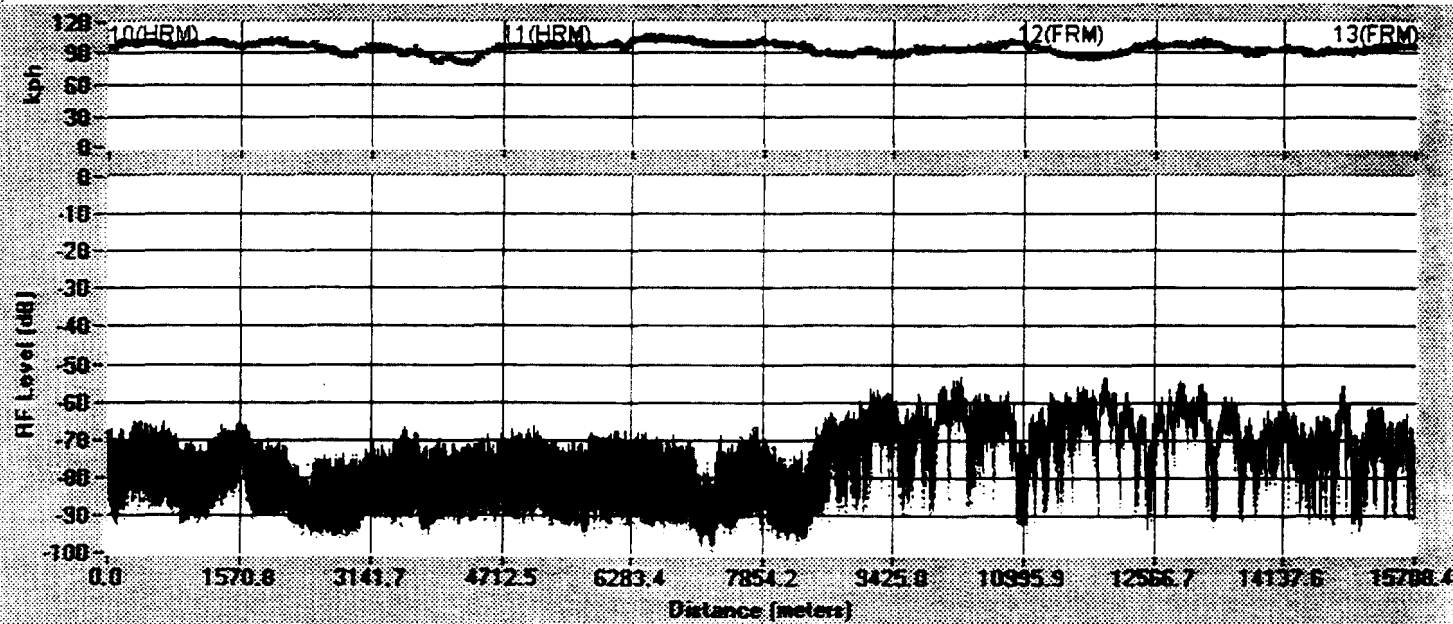
Event Summary: Total 5737; Clear 5737 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

### VHF Reference -- East Bay Route -- Landmarks 7-10



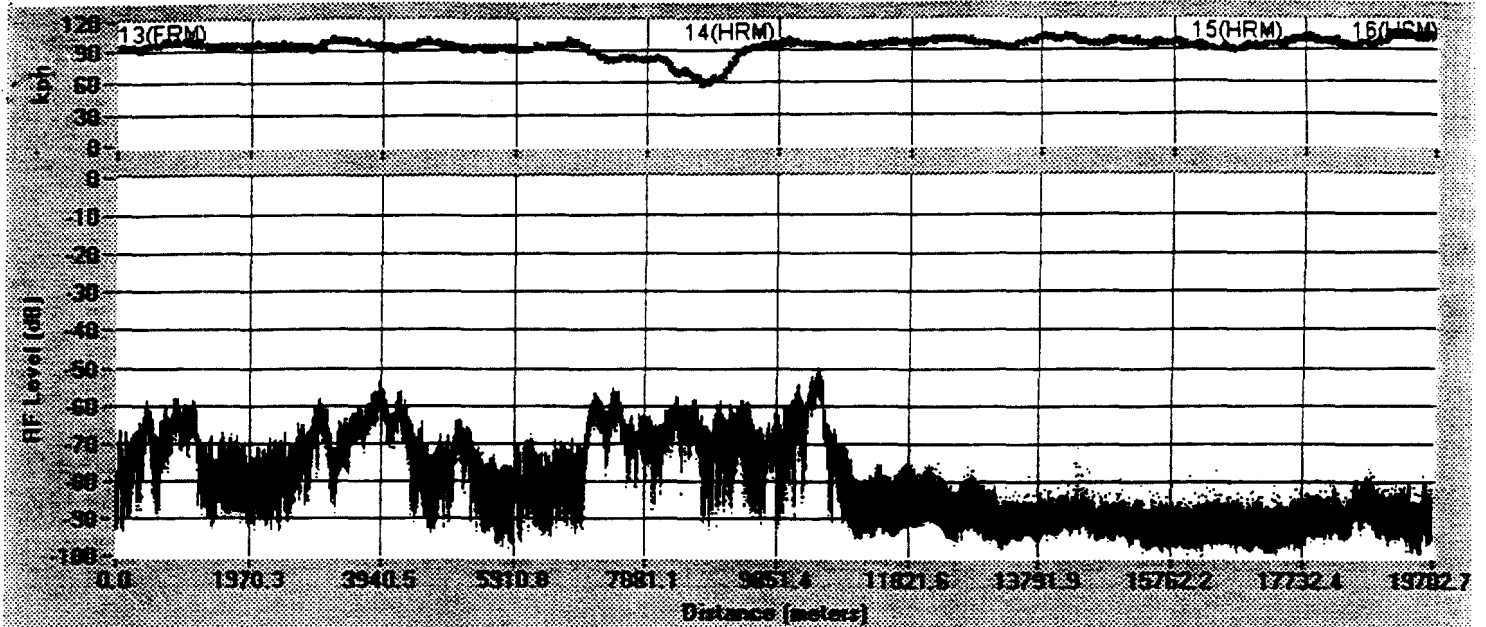
Event Summary: Total 11070; Clear 11070 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

### VHF Reference -- East Bay Route -- Landmarks 10-13



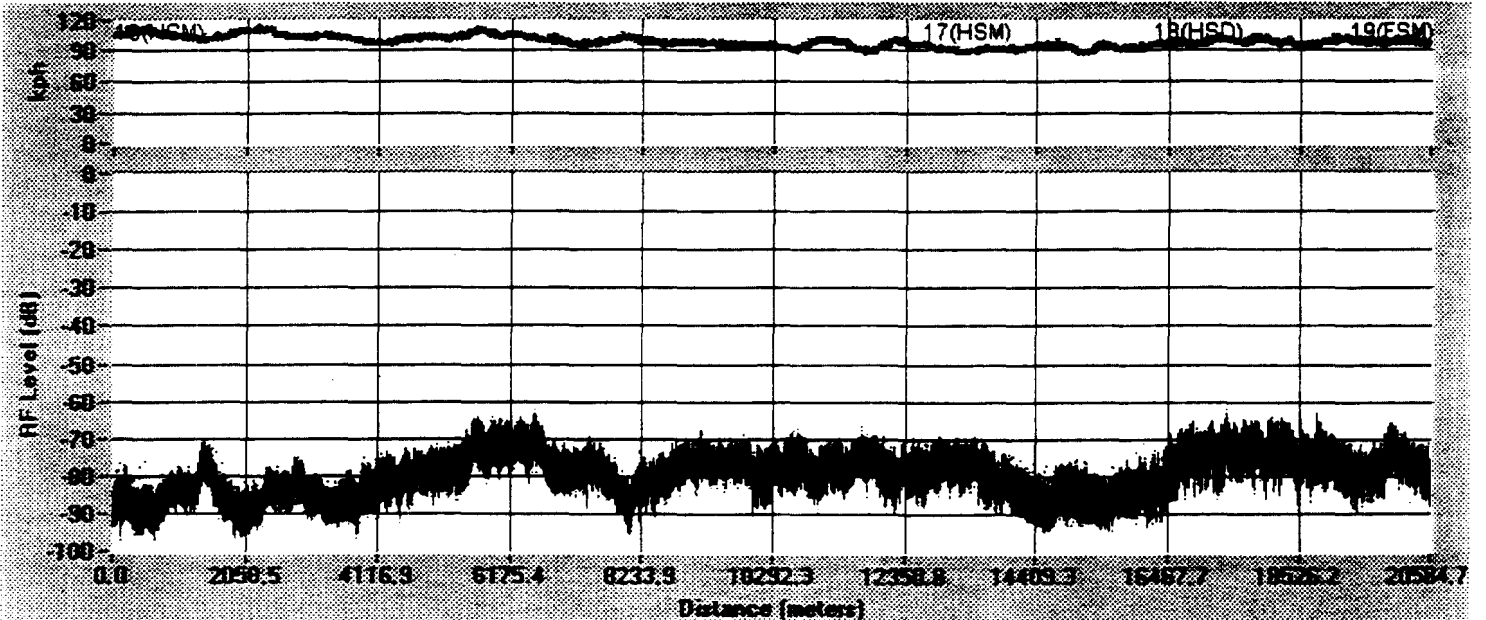
Event Summary: Total 11536; Clear 11536 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

# VHF Reference -- East Bay Route -- Landmarks 13-16



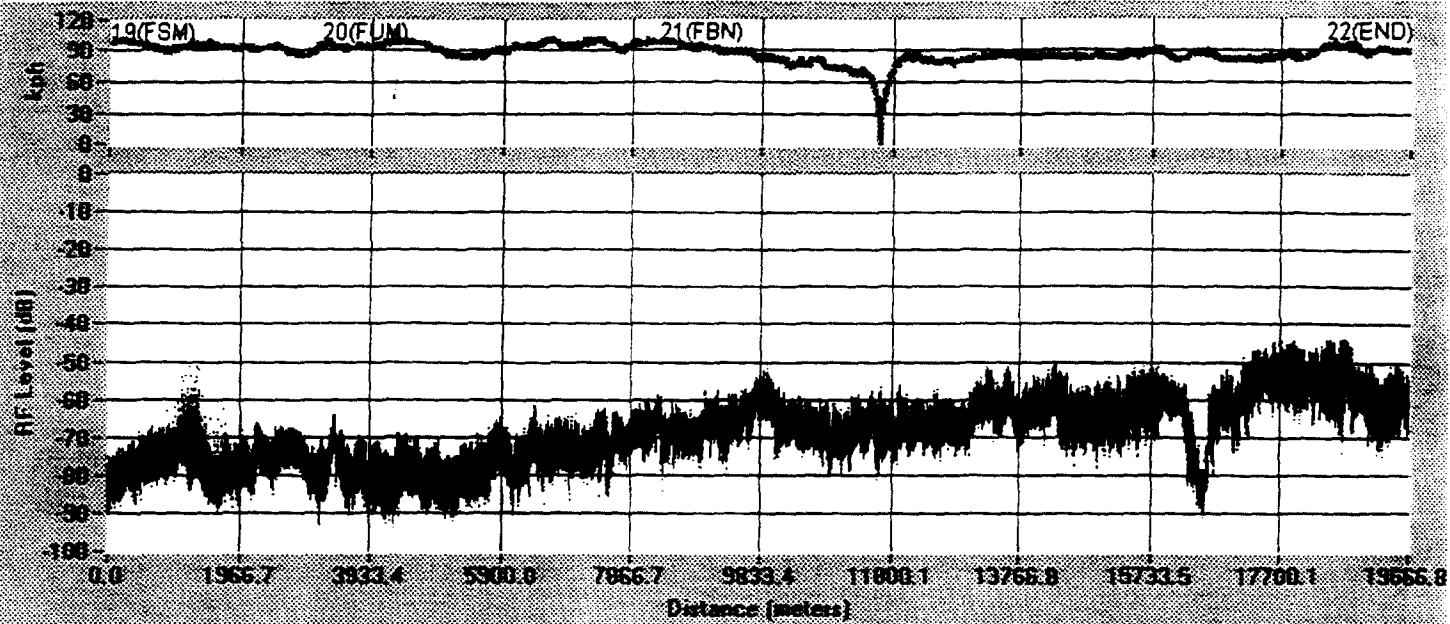
Event Summary: Total 15008; Clear 15008 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

# VHF Reference -- East Bay Route -- Landmarks 16-19



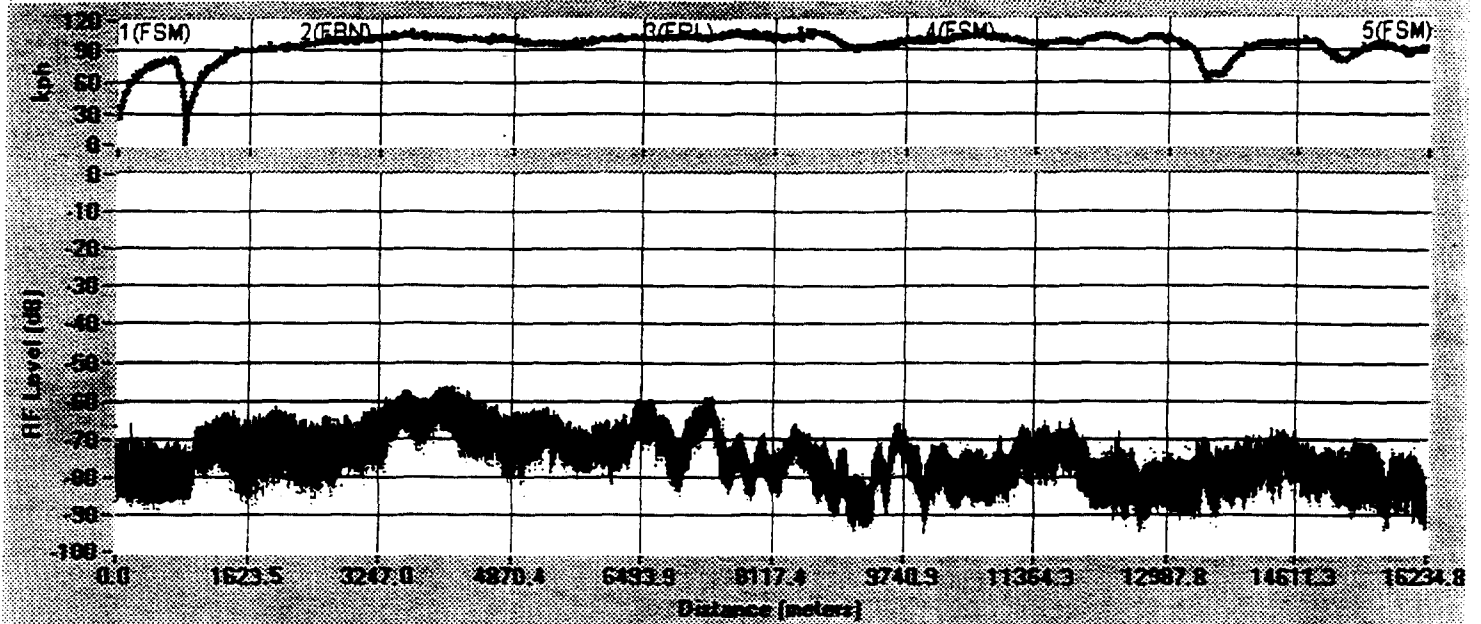
Event Summary: Total 14652; Clear 14652 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

# VHF Reference - East Bay Route - Landmarks 19-22



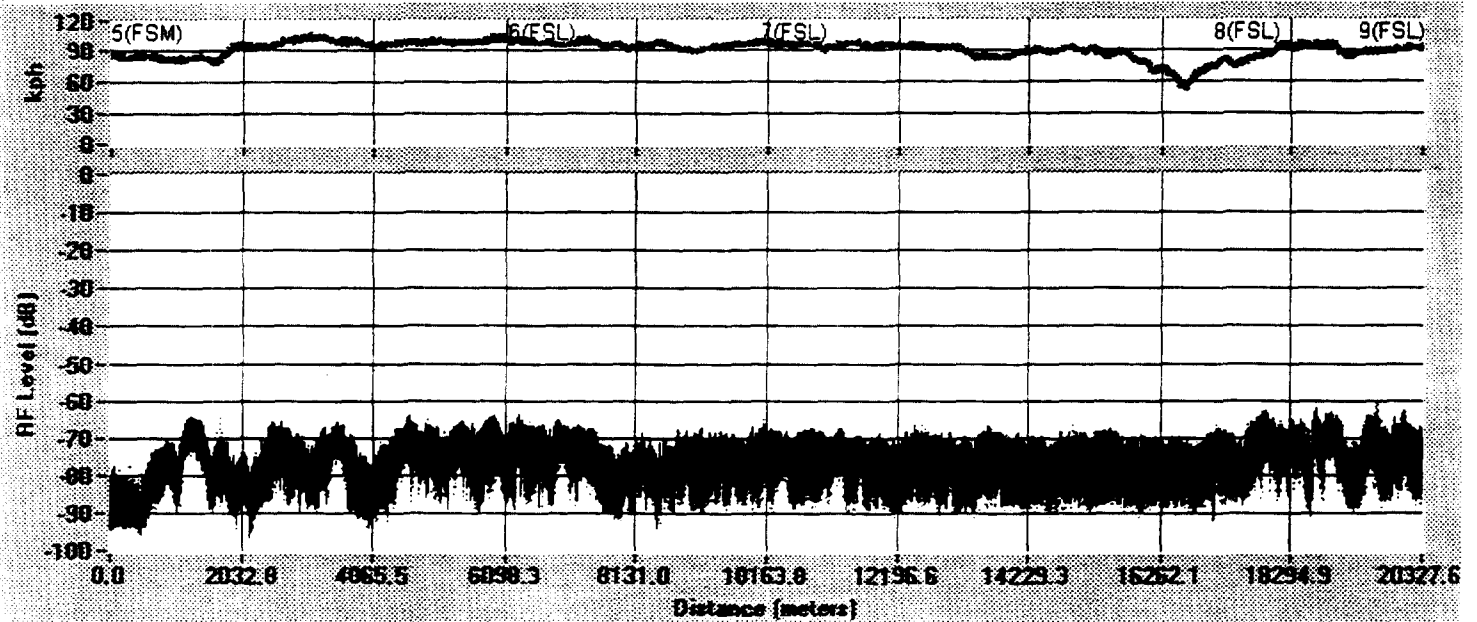
Event Summary: Total 16582; Clear 16582 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

### VHF Reference -- South Bay Route -- Landmarks 1-5

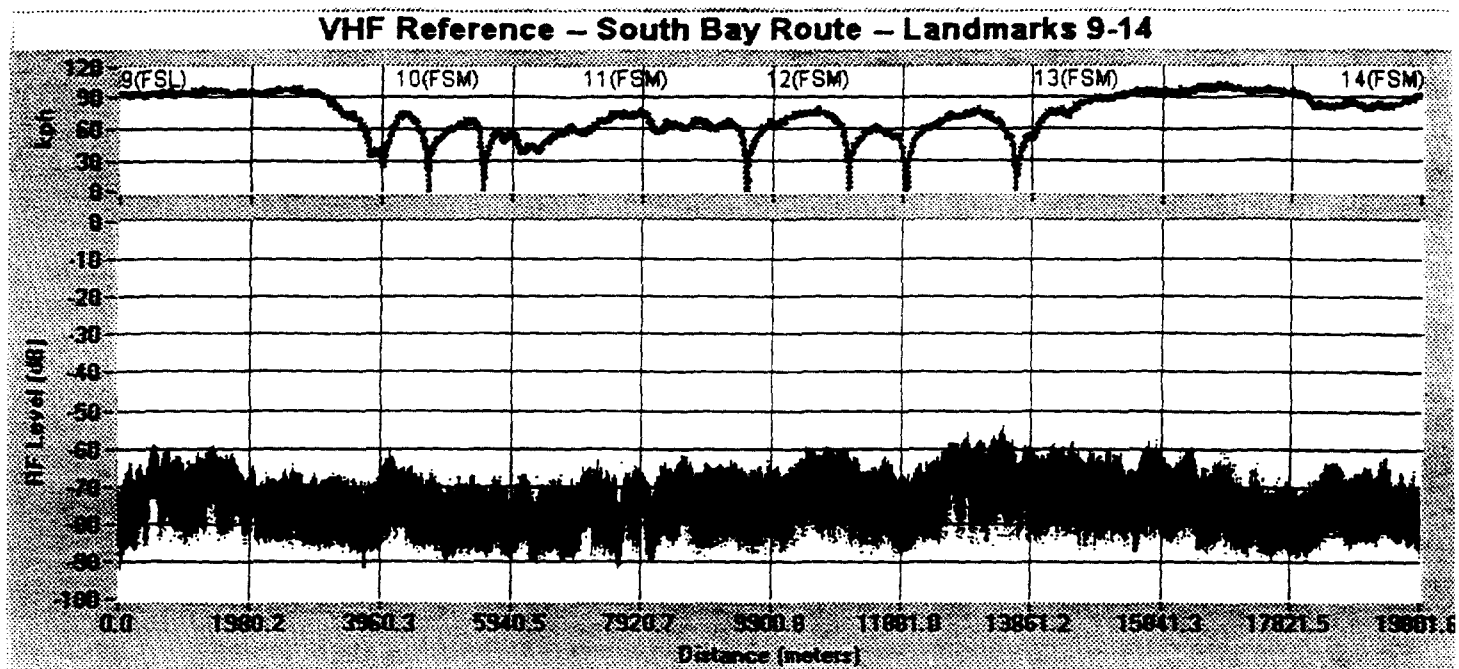


Event Summary: Total 12913; Clear 12913 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

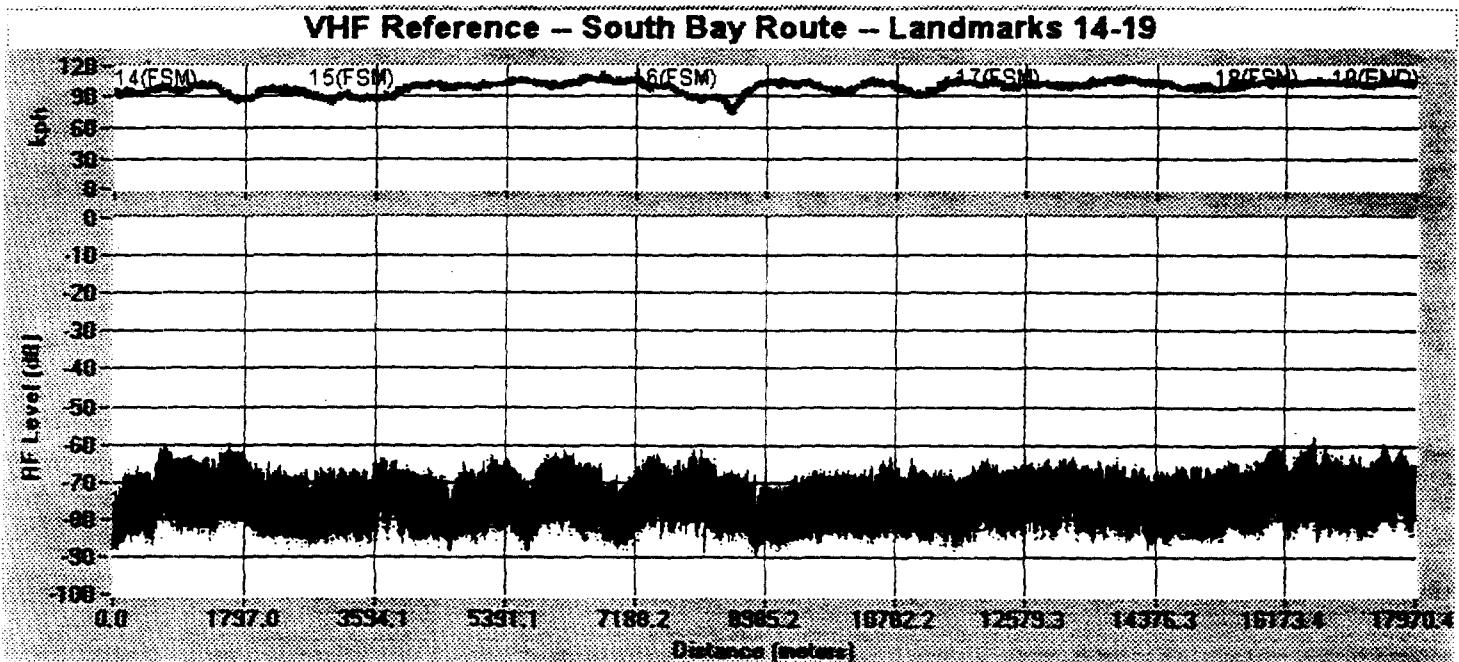
### VHF Reference -- South Bay Route -- Landmarks 5-9



Event Summary: Total 16462; Clear 16462 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

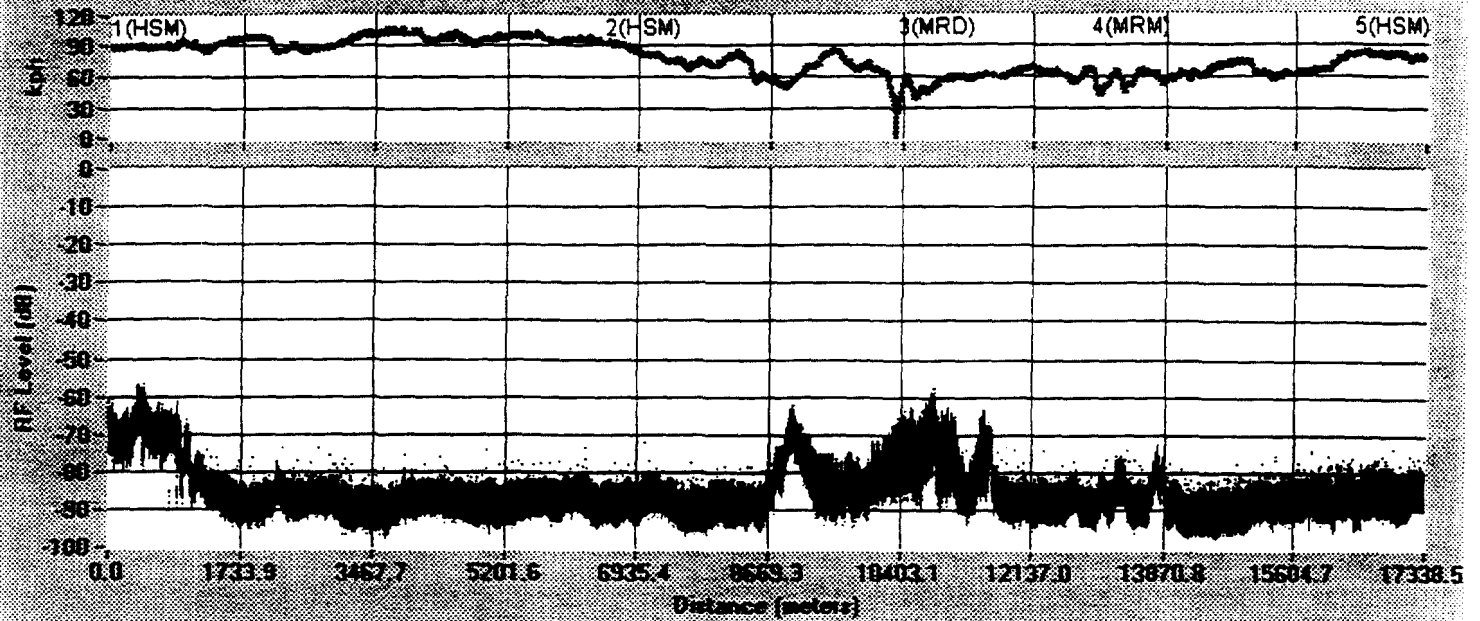


Event Summary: Total 24062; Clear 24062 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).



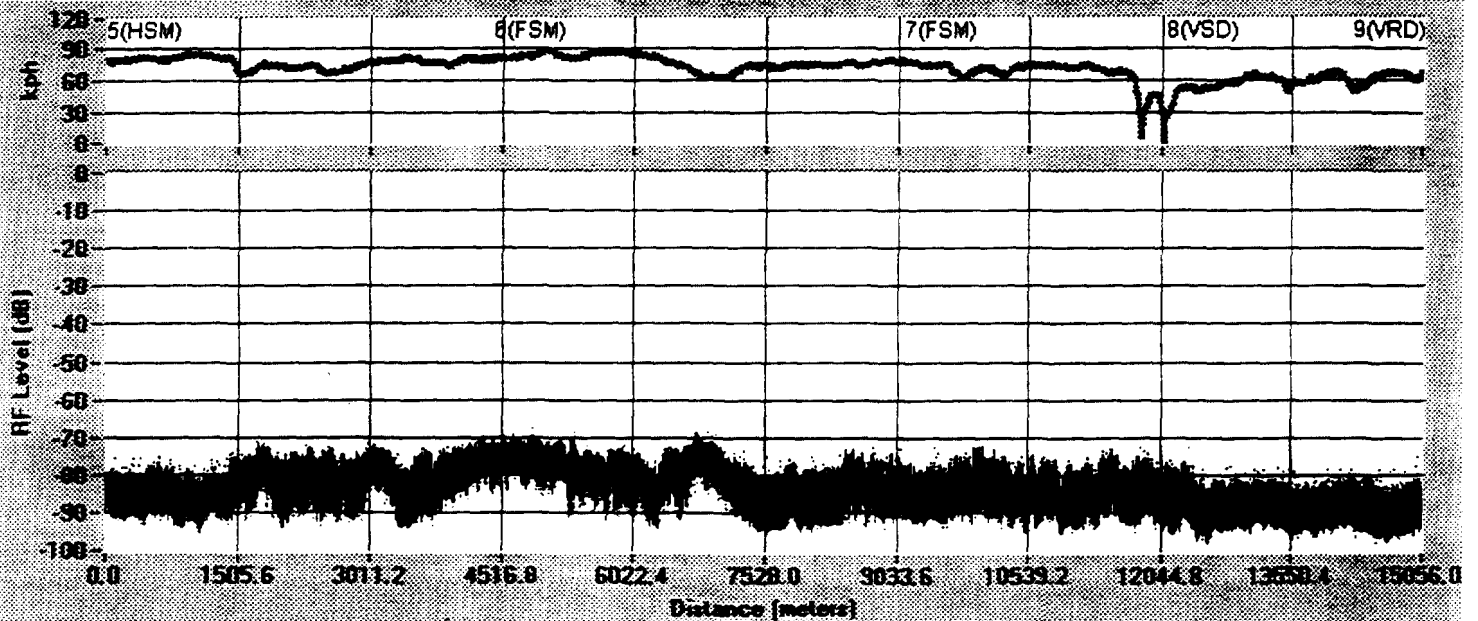
Event Summary: Total 12896; Clear 12896 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

### VHF Reference -- Peninsula Route -- Landmarks 1-5



Event Summary: Total 17937; Clear 17937 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

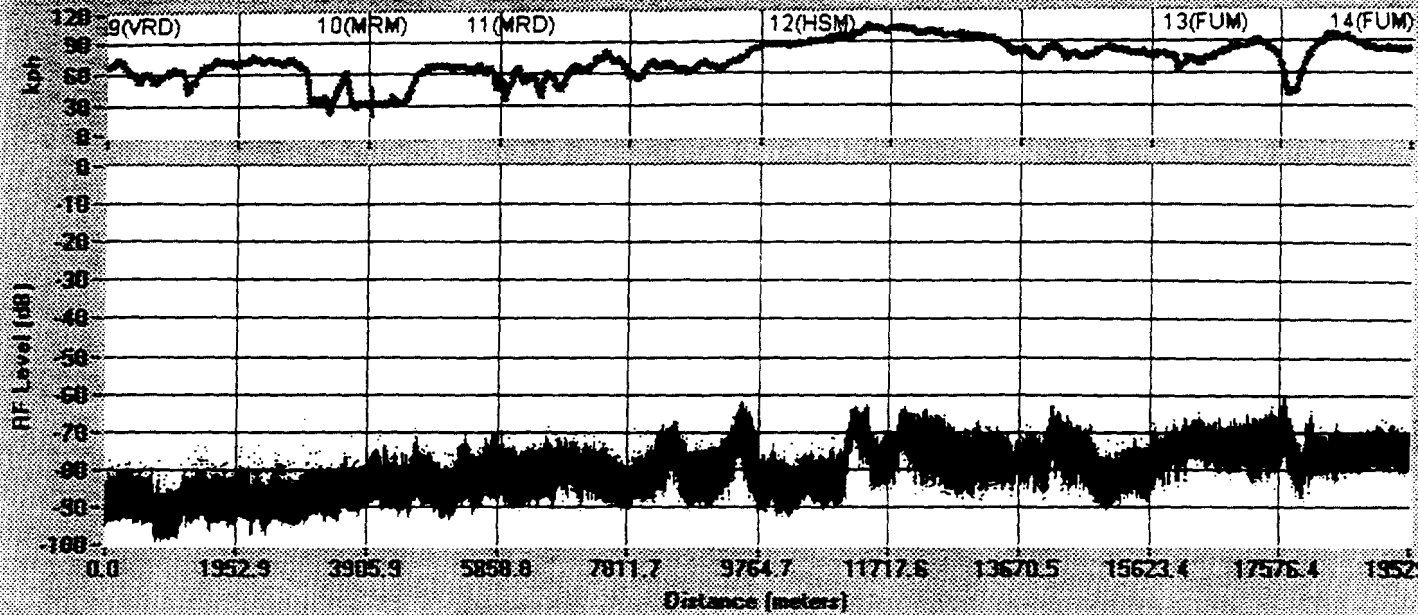
### VHF Reference -- Peninsula Route -- Landmarks 5-9



Event Summary: Total 16979; Clear 16979 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

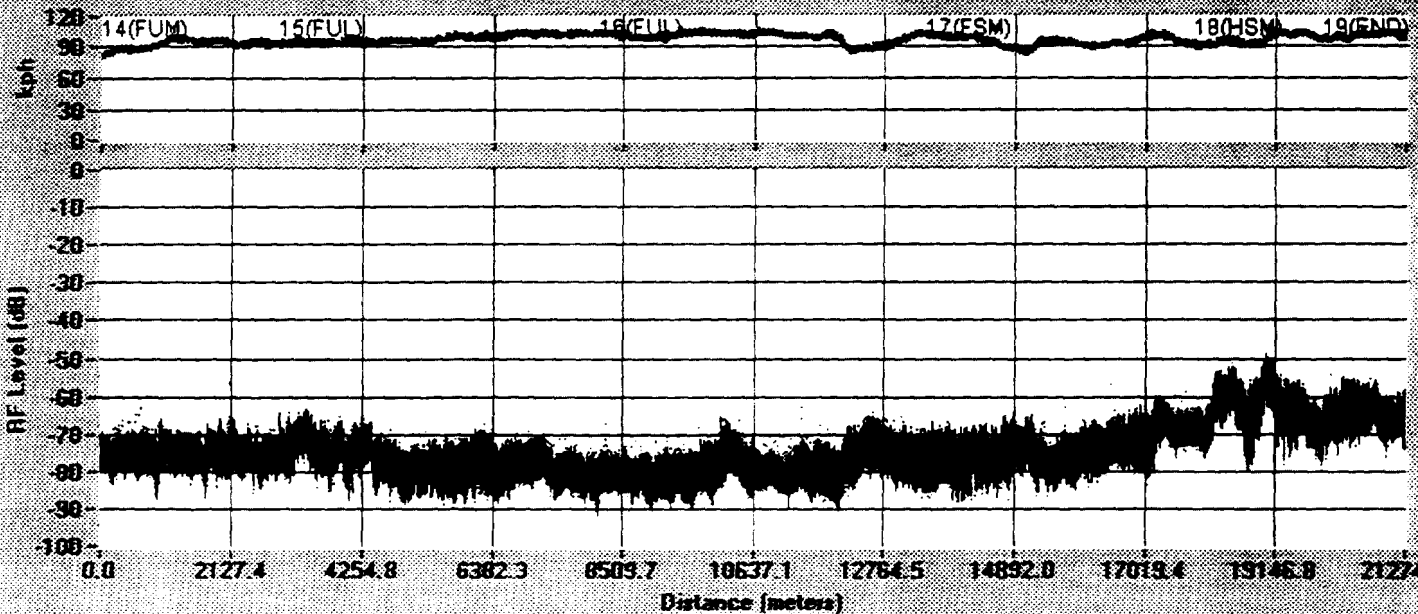


### VHF Reference – Peninsula Route – Landmarks 9-14



Event Summary: Total 21980; Clear 21980 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).

### VHF Reference – Peninsula Route – Landmarks 14-19



Event Summary: Total 15332; Clear 15332 (100.0%); Impaired 0 (0.0%); Muted 0 (0.0%).